

| | | | , |
|------------|------|---|-----|
| | | | |
| | | | |
| | | | 11 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | - | | • |
| | | | |
| | | | |
| • | | | |
| | | | 1 - |
| | | | |
| | | / | |
| | | | |
| | | | |
| 1 | | | |
| | | | |
| | | | |
| | | | |
| • | | | r |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | • | | |
| | • | | |
| TA . | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | 1 | | . ' |
| | | - | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | 0 | | |
| | Δ | | |
| | | | |
| | | | , |
| | | | |
| | | | |
| | | | • |
| | | | |
| b . | | | |
| | | | , |
| | | | |
| | 3 10 | | |
| | | | |
| | | | |
| | | | |
| · · | • | | 1 |
| | | | |
| | | • | |
| • | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| X 1 | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Vol. III

1946

No. 1

MEMOIRS

of the

Southern California Academy of Sciences



A Guide to the Literature and Distributions of the Marine Algae of the Pacific Coast of North America

by E. YALE DAWSON

Southern California Academy of Sciences

OFFICERS and DIRECTORS

DR. H. J. ANDREWS

DR. A. WEIR BELL

DR. WILLIAM L. LLOYD

DR. JOHN A. COMSTOCK.

DR. H. J. ANDREWS

DR. A. WEIR BELL

DR. JOHN A. COMSTOCK

DR. ROBERT D. EMERY

DR. JOHN HERMAN

MR. R. S. WOGLUM

President

Second Vice-President

Secretary and Treasurer

DR. WILLIAM L. LLOYD

MR. THEODORE PAYNE

DR. W. DWIGHT PIERCE

DR. CHESTER STOCK

DR. LOUIS C. WHEELER

ADVISORY BOARD

MR. FRED E. BURLEW
MR. A. YORK ESCALANTE
MR. SAMUEL MOODY HASKINS

DR. HOWARD R. HILL
DR. R. H. SWIFT
DR. SHERWIN F. WOOD

BOTANICAL SECTION
DR. GEORGE R. JOHNSTONE, Chairman

SECTION OF HEALTH AND SANITATION DR. ROBERT D. EMERY, Chairman

SECTION OF ZOOLOGICAL SCIENCES DR. A. WEIR BELL, Chairman

SECTION OF CHEMICAL SCIENCES Major Jos. B. Ficklen III, Chairman

SECTION OF EARTH SCIENCES Dr. Chester Stock, Chairman

SECTION OF PHYSICAL SCIENCES DR. LEE DEFOREST, Chairman

SECTION OF AGRICULTURAL SCIENCES
MB. RUSSELL S. WOGLUM, Chairman

SECTION OF JUNIOR SCIENCE Mr. A. York, Escalante, Chairman

ARCHEOLOGICAL SECTION
MR. ARTHUR WOODWARD, Chairman

FINANCE COMMITTEE

Mr. Fred E. Burlew, Chairman

Mr. Samuel Moody Haskins Dr. John A. Comstock

PROGRAM COMMITTEE

DR. ROBERT L. RUTHERFORD, Chairman

DR. HOWARD R. HILL

HOSPITALITY COMMITTEE
DR. W. DWIGHT PIERCE, Chairman

MRS. EUNICE KING MR. HUGH D. AUSTIN
COMMITTEE ON PUBLICATION

DR. JOHN A. COMSTOCK, Chairman
DR. CHESTER STOCK DR. HOWARD R. HILL DR. WILLIAM L. LLOYD

COMMITTEE ON CONSERVATION
DR. JOHN A. COMSTOCK, Chairman
MR. THEODORE PAYNE
PROF. J. STANLEY BRODE

Office of the Academy
Los Angeles County Museum, Exposition Park, Los Angeles 7, Calif.





A GUIDE TO THE

Literature and Distributions

OF THE

Marine Algae of the Pacific Coast of North America

%

By E. YALE DAWSON

Memoirs of the Southern California Academy of Sciences Vol. 3, No. 1, 1946 19544

Frency, to

A GUIDE TO THE LITERATURE AND DISTRI-BUTIONS OF THE MARINE ALGAE OF THE PACIFIC COAST OF NORTH AMERICA

 $\mathbf{B}\mathbf{y}$

E. YALE DAWSON

INTRODUCTION

More than two decades have elapsed since the monographs by Setchell and Gardner of the Chlorophyceae and Phaeophyceae brought our knowledge of these groups of marine algae on the Pacific Coast of North America up to date for 1920 and 1925, respectively. Although these works are still highly authoritative and moderately complete, a considerable number of papers dealing with the green and brown algae of our coasts have subsequently appeared, creating changes and additions in these classes. The status of the Rhodophyceae, moreover, has long been unsatisfactory, for no assembly of the literature dealing with Pacific Coast species, nor complete survey of the species, has ever been accomplished. The existing information is badly scattered and largely inaccessible except to those few who have access to a large library and to collections such as those of the University of California. Aiming toward alleviating this situation, an attempt has been made to assemble here the published records of determinations and distributions of all the marine algae of the Pacific Coast of North America, with the exception of the Myxophyceae.

The appearance of three important works within the past year, each dealing with the algal flora of a different part of the Pacific Coast, has made this task immeasurably easier and more practicable. Smith's Marine Algae of the Monterey Peninsula, California, in treating of a large proportion of the species occurring on the Pacific Coast of the United States, has been of signal value in bringing together a great amount of information on these northern plants. The author's monograph of the Marine Algae of

the Gulf of California has brought that region up to date such that no further assembly nor review of its literature was necessary. The valuable work of Taylor: Pacific Marine Algae of the Allan Hancock Expeditions to the Galapagos Islands has provided abundant information on the algal floras of the Mexican and Central American coasts of which almost nothing was previously known.

Citation of all the references to any given species has not been possible, but the references cited include the most recent ones and will serve in each case as a key to the previous literature.

The limits of the "Pacific Coast of North America" are taken as the Aleutian Islands on the north and the Gulf of Panamá on the south. The coastwise distance between Attu Island and Panamá is nearly 6500 miles. For the sake of consistency, distribution records are cited from north to south.

La Jolla, California, June 30, 1945.

LIST OF SPECIES

CHLOROPHYCEAE

(GREEN ALGAE)

Order VOLVOCALES

Fam. Polyblepharidaceae

Stephanoptera gracilis (Artari) G. M. Smith Smith, 1944 San Francisco Bay; Monterey, Calif.

Dunaliella salina (Dunal) Teodoresco Smith, 1944 San Francisco; Monterey, Calif.

Fam. Chlamydomonadaceae

PLATYMONAS SUBCORDIFORMIS (Wille) Hazen Smith, 1944 Monterey, Calif.

Order TETRASPORALES

Fam. Chlorangiaceae

Collinsiella tuberculata Setchell & Gardner Smith, 1944
Vancouver Is., B. C. to Pacific Grove, Calif.

Prasinocladus Lubricus Kuckuck Smith, 1944 Monterey, Calif.

Order ULOTRICHALES

Fam. Ulotrichaceae

Ulothrix flacca (Dillwyn) Thuret Setchell & Gardner, 1920 Alaska to California

ULOTHRIX IMPLEXA Kützing Smith, 1944 Bering Sea to Monterey, Calif. ULOTHRIX LAETEVIRENS (Kützing) Collins Setchell & Gardner, 1920 Unalaska, Alaska to California

ULOTHRIX PSEUDOFLACCA f. MINOR Wille Setchell & Gardner, 1920 Sitka, Alaska

ULOTHRIX PSEUDOFLACCA f. MAJOR Wille Setchell & Gardner, 1920 San Francisco, Calif.

ULOTHRIX PSEUDOFLACCA f. MAXIMA Setchell & Gardner Setchell & Gardner, 1920 San Francisco, Calif.

Fam. Chaetophoraceae

Bulbocoleon Piliferem Pringsheim Setchell & Gardner, 1920; Dawson, 1945B Southern Calif.

PILINIA LUNATIAE f. SIMPLEX Thivy Taylor, 1945 Panama City, Panamá

PILINIA MARITIMA f. PACIFICA Thivy Taylor, 1945 Is. Clarion, Revilla Gigedo Arch.

Phaeophilia dendroides (Crouan) Batters Taylor, 1945 Is. María Magdalena, Nayarit

Is. María Magdalena, Nayarit Phaeophilia Engleri Reinke

Taylor, 1945 Is. Clarion, Revilla Gigedo Arch.; Tangola-Tangola, Oaxaca to Is. Taboga, Panamá

Phaeophilia polymorpha Jao Jao, 1937 San Juan Is., Wash.

Entocladia cingens Setchell & Gardner Setchell & Gardner, 1920 San Diego, Calif.

Entocladia codicola Setchell & Gardner Smith, 1944; Dawson, 1945B Monterey Peninsula to La Jolla, Calif.

Entocladia condensata Setchell & Gardner
Dawson, 1944
Puerto Libertad, Sonora; Is. San Esteban, Gulf of Calif.

Entocladia Mexicana Setchell & Gardner Dawson, 1944

Is. Angel de la Guarda, Gulf of Calif.; La Paz, Baja Calif.

Entocladia Polysiphoniae Setchell & Gardner Dawson, 1944 Guaymas, Sonora; La Paz, Baja Calif.

Entocladia viridis Reinke Smith, 1944 Moss Beach, San Mateo Co.; Monterey, Calif.

Endophyton Ramosum Gardner Smith, 1944 San Francisco; Monterey Peninsula, Calif.

Pseudodictyon Geniculatum Gardner Smith, 1944 San Francisco; Pacific Grove, Calif.

Internoretia Freyeana Setchell & Gardner Setchell & Gardner, 1920 Friday Harbor, Wash.

Ulvella Setchellii Dangeard Smith, 1944; *Ulvella Lens* in Setchell & Gardner, 1930 Pacific Grove, Calif.; Is. Guadalupe, Baja Calif.

Pseudoulvella applanata Setchell & Gardner Smith, 1944 Carmel, Calif.

Pseudoulvella consociata Setchell & Gardner Setchell & Gardner, 1920 San Francisco Bay at Alameda, Calif.

Pseudoulvella prostrata (Gardner) Setchell & Gardner Setchell & Gardner, 1920 San Francisco, Calif.

Pseudopringsheimia apiculata Setchell & Gardner Smith, 1944
San Francisco; Monterey, Calif.

Pringsheimiella Marchantae (Setchell & Gardner)
Schmidt

Schmidt, 1935; Pringsheimia Marchantae in Dawson.

1944
La Day Day Court

La Paz, Baja Calif.

Fam. Trentepohliaceae

Gomontia polyrhiza (Lagerheim) Bornet & Flahault Smith, 1944 Neah Bay, Wash.; Monterey, Calif.

Trentepohlia odorata (Wiggers) Wittrock Sanborn & Doty, 1946 Coos Bay, Oregon

Trentepohlia odorata var. umbrina (Kützing) Hariot Setchell & Gardner, 1920 San Pedro, Calif.

Order ULVALES

Fam. Ulvaceae

Monostroma areolatum Setchell & Gardner Setchell & Gardner, 1920 Sitka, Alaska

Monostroma fractum Jao Jao, 1937 Turn Is., Wash.

Monostroma fuscum (Postels & Ruprecht) Wittrock Setchell & Gardner, 1920 Alaska to Puget Sound, Wash.

Monostroma fuscum var. splendens (Ruprecht) Rosenvinge Setchell & Gardner, 1920 Alaska to Vancouver Is., B. C.

Monostroma fuscum var. Blyttii (Areschoug) Collins Setchell & Gardner, 1920 Vancouver Is., B. C.; Washington

Monostroma Grevillei (Thuret) Wittrock Setchell & Gardner, 1920 Unalaska, Alaska

Monostroma Grevillei var. Lubricum (Kjellman) Collins Setchell & Gardner, 1920 Sitka, Alaska

Monostroma Grevillei var. Vahlii (J. Agardh) Rosenvinge Setchell & Gardner, 1920 Kukak Bay; Sitka, Alaska

Monostroma Latissimum (Kützing) Wittrock Setchell & Gardner, 1920 Vancouver, B. C. to central California Monostroma orbiculatum Thuret Setchell & Gardner, 1920 Central California

Monostroma Quaternarium (Kützing) Desmazières Setchell & Gardner, 1920 Washington to southern California

Monostroma zostericola Tilden Smith, 1944 Vancouver Is., B. C.; Puget Sound, Wash.; Monterey Peninsula, Calif.

Enteromorpha Acanthophora Kützing Dawson, 1944 Gulf of Calif.

Enteromorpha clathrata (Roth) Greville Smith, 1944 Sitka, Alaska to Carmel, Calif.

Enteromorpha crinita (Roth) J. Agardh Setchell & Gardner, 1920 Valdes, Alaska to San Diego, Calif.

Enteromorpha compressa (Linnaeus) Greville Smith, 1944; Dawson, 1944 Bering Sea to central México; Gulf of Calif.

Enteromorpha erecta J. Agardh Setchell & Gardner, 1920 Comox, Vancouver Is., В. С. to Santa Rosa Is., Calif.

Enteromorpha flexuosa (Wulfen) J. Agardh Setchell & Gardner, 1920; Taylor, 1945 Santa Barbara, Calif. to Port Parker, Costa Rica

Enteromorpha Groenlandica (J. Agardh) Setchell & Gardner Setchell & Gardner, 1920 Bering Sea to Unalaska, Alaska

Enteromorpha intestinalis (Linnacus) Link Smith, 1944; Dawson, 1944 Kukak Bay, Alaska to La Paz, Baja Calif.; Gulf of Calif.

Enteromorpha intestinalis f. cylindracea J. Agardh Setchell & Gardner, 1920 Alaska to México

Enteromorpha intestinalis f. maxima J. Agardh Setchell & Gardner, 1920 Alaska to México

- Enteromorpha intestinalis f. clavata J. Agardh Setchell & Gardner, 1920 Alaska to México
- Enteromorpha Lingulata J. Agardh Setchell & Gardner, 1920; Taylor, 1945 Is. Guadalupe, Baja Calif. to Balboa, Canal Zone
- Enteromorpha Marginata J. Agardh Setchell & Gardner, 1920 Vancouver Is., B. C. to Calif.
- Enteromorpha micrococca Kützing Smith, 1944 Dutch Harbor, Alaska to México
- Enteromorpha Microcca f. subsalsa Kjellman Setchell & Gardner, 1920 Skagway, Alaska to Puget Sound, Wash.
- Enteromorpha minima Nägeli Smith, 1944 Dutch Harbor, Alaska to México
- Enteromorpha plumosa Kützing Setchell & Gardner, 1920; 1930 Puget Sound, Wash.; San Francisco, Calif.; Is. Clarion, Revilla Gigedo Arch.
- Enteromorpha prolifera (Müller) J. Agardh Setchell & Gardner, 1920; Dawson, 1944 Alaska to Central America
- Enteromorpha salina var. polyclados Kützing Setchell & Gardner, 1920 San Francisco Bay, Calif.
- Enteromorpha torta (Mertens) Reinbold Setchell & Gardner, 1920; Jao, 1937 Friday Harbor, Wash.; San Diego, Calif.
- Enteromorpha tubulosa Kützing Smith, 1944; Dawson, 1945E Sausalito, Calif. to Cabo Colnett, Baja Calif.
- ULVA ANGUSTA Setchell & Gardner Smith, 1944; Dawson, 1944; Setchell & Gardner, 1930 Humboldt Co. to Carmel, Calif.; Is. Guadalupe, Baja Calif. ?; Guaymas, Sonora
- ULVA CALIFORNICA Wille Setchell & Gardner, 1920 San Diego Co., Calif.

ULVA DACTYLIFERA Setchell & Gardner Setchell & Gardner, 1920; Dawson, 1944 Southern Calif. to San Roque, Baja Calif.; southern Gulf of Calif.

ULVA EXPANSA (Setchell) Setchell & Gardner Smith, 1944 Puget Sound, Wash. to La Paz, Baja Calif.?

ULVA FENESTRATA Postels & Ruprecht Setchell & Gardner, 1920 Sitka, Alaska to Puget Sound, Wash.

ULVA LACTUCA Linnaeus Smith, 1944; Dawson, 1944; Taylor, 1945 Bering Sea to Panamá

ULVA LATISSIMA Linnaeus Setchell & Gardner, 1920 Juneau, Alaska

Ulva Linza Linnaeus Smith, 1944 Orca, Alaska to La Paz, Baja Calif.

Ulva lobata (Kützing) Setchell & Gardner Smith, 1944; Taylor, 1945 San Francisco to San Diego, Calif.; Bahía Petatlán, Guerrero

ULVA RIGIDA C. Agardh Smith, 1944; Dawson, 1944; Taylor, 1945 Uyak Bay, Alaska to La Paz, Baja Calif.; Gulf of Calif.; Is. María Madre, Nayarit

ULVA STENOPHYLLA Setchell & Gardner Smith, 1944
Bolinas to Monterey, Calif.

ULVA TAENIATA (Setchell) Setchell & Gardner Smith, 1944; Dawson, 1945E Coos Bay, Oregon to Carmel, Calif.; Punta Descanso; Cabo Colnett, Baja Calif.

Ulva vexata Setchell & Gardner Setchell & Gardner, 1920 San Francisco, Calif.

Percursaria percursa (C. Agardh) Rosenvinge Setchell & Gardner, 1920 Unalaska, Alaska to San Francisco Bay, Calif.

Order SCHIZOGONIALES

Fam. Schizogoniaceae

Prasiola borealis Reed Setchell & Gardner, 1920 Unalaska, Kodiak and Baranof Is., Alaska

Prasiola calophylla (Carmichael) Meneghini Setchell & Gardner, 1920 Whidbey Is., Wash.

Prasiola delicatula Setchell & Gardner Setchell & Gardner, 1920 Sitka, Alaska

Prasiola Meridionalis Setchell & Gardner Smith, 1944 Friday Harbor, Wash. to Carmel, Calif.

GAYELLA CONSTRICTA Setchell & Gardner Smith, 1944 Friday Harbor, Wash.; Tomales Point; Monterey, Calif.

GAYELLA POLYRHIZA Rosenvinge Setchell & Gardner, 1920 Amaknak Is., Alaska

Order CLADOPHORALES

Fam. Cladophoraceae

RHIZOCLONIUM IMPLEXUM (Dillwyn) Kützing Smith, 1944 Unalaska, Alaska to Carmel, Calif.

RHIZOCLONIUM KERNERI Stockmayer Setchell & Gardner, 1920; Taylor, 1945 Victoria, B. C.; Is. Clarion, Revilla Gigedo Arch.

RHIZOCLONIUM RIPARIUM (Roth) Harvey Smith, 1944 Unalaska, Alaska to Carmel, Calif.

RHIZOCLONIUM TORTUOSUM (Dillwyn) Kützing Smith, 1944 Alaska to Carmel, Calif.

Lola Lubrica (Setchell & Gardner) A. et G. Hamel Dawson, 1944; Rhizoclonium lubricum in Setchell & Gardner, 1920; Taylor, 1945 Rocke Harbor, Wash. to Puerto Culebra, Costa Rica

- Hormiscia doliifera Setchell & Gardner Setchell & Gardner, 1920 San Francisco, Calif.
- Hormiscia Grandis (Kylin) Setchell & Gardner Setchell & Gardner, 1920 Unalaska, Alaska to Puget Sound, Wash.
- HORMISCIA PENICILLIFORMIS (Roth) Fries Setchell & Gardner, 1920; Urospora peniciliformis in Smith, 1944 Bering Sea to Carmel, Calif.
- Hormiscia sphaerulifera Setchell & Gardner Setchell & Gardner, 1920 Whidbey Is., Wash.
- Hormiscia tetraciliata Frye & Zeller Setchell & Gardner, 1920 San Juan County, Wash.
- Hormiscia vancouveriana (Tilden) Setchell & Gardner Setchell & Gardner, 1920 Oak Bay, Vancouver Is., B. C.
- Hormiscia Wormskioldii (Mertens) Fries Setchell & Gardner, 1920 Friday Harbor, Wash. to Gualala, Calif.
- Снаетомогрна Aerea (Dillwyn) Kützing Smith, 1944; Dawson, 1944 Santa Cruz to San Diego, Calif.; northern Gulf of Calif.
- Снаетомогрна антенніна (Bory) Kützing Setchell & Gardner, 1920; Dawson, 1945В, 1945Е; Taylor, 1945 La Jolla, Calif. to Panamá
- Снаетомогрна californica Collins Setchell & Gardner, 1920 Laguna Beach to La Jolla, Calif.
- Снаетомогрна саппавіна (Areschoug) Kjellman Setchell & Gardner, 1920 Alaska to Puget Sound, Wash.
- Снаетомогрна clavata (С. Agardh) Kützing Dawson, 1945E Punta Descanso; Cabo Colnett, Baja Calif.
- Снаетомогрна crassa (С. Agardh) Kützing Taylor, 1939 Bahía Magdalena, Baja Calif.

- Снаетомогрна меlangonium (Weber & Mohr) Kützing Setchell & Gardner, 1920 Unalaska; Kodiak Is., Alaska
- Снаетомогрна тепиізsіма Jao Jao, 1937 Friday Harbor, Wash.
- Снаетомогрна токта (Farlow) McClatchie Setchell & Gardner, 1920; Dawson, 1945В Southern Calif.
- CLADOPHORA ALBIDA (HUDSON) Kützing Setchell & Gardner, 1920; Dawson, 1944 East Sound, Wash.; San Pedro, Calif.; Kino, Sonora
- CLADOPHORA AMPHIBIA Collins Setchell & Gardner, 1920 San Francisco Bay, Calif.
- CLADOPHORA BERTOLONII var. HAMOSA (Kützing) Ardissone Smith, 1944 Pacific Grove, Calif.
- CLADOPHORA DELICATULA Montagne Smith, 1944; Dawson, 1944 Monterey Peninsula; San Diego, Calif.; Rio Mayo, Sonora
- CLADOPHORA FLEXUOSA (Griffiths) Harvey Smith, 1944 Annettee Is., Alaska to San Diego, Calif.
- CLADOPHORA GLAUCESCENS (Griffiths) Harvey Setchell & Gardner, 1920 Nanaimo, B. C. to Oakland, Calif.
- CLADOPHORA GRACILIS (Griffiths) Kützing Setchell & Gardner, 1920 Sitka, Alaska; Neah Bay, Wash.
- Cladophora gracilis f. expansa Farlow Taylor, 1945 Is. Clarion, Revilla Gigedo Arch.
- CLADOPHORA GRAMINEA Collins Smith, 1944; Dawson, 1944; 1945E Santa Cruz, Calif. to Guaymas, Sonora
- CLADOPHORA HEMISPHAERICA Gardner Smith, 1944 Monterey Peninsula, Calif.

- CLADOPHORA HESPERIA Setchell & Gardner Dawson, 1944 Kino, Sonora to cape district, Baja Calif.
- CLADOPHORA HUTCHINSIAE (Dillwyn) Kützing Setchell & Gardner, 1920 Vancouver Is., B. C.
- CLADOPHORA HUTCHINSIAE var. DISTANS (C. Agardh)
 Kützing
 Setchell & Gardner, 1920
 West coast of Vancouver Is., B. C.
- CLADOPHORA LAETEVIRENS (Dillwyn) Kützing Setchell & Gardner, 1920 Vancouver, B. C. and Straits of Juan de Fuca
- CLADOPHORA MACDOUGALII Howe Dawson, 1944 Bahía San Felipe, Baja Calif.
- CLADOPHORA MICROCLADIOIDES Collins Smith, 1944; Dawson, 1944; 1945E Vancouver, B. C. to Gulf of Calif.
- CLADOPHORA MICROCLADIOIDES f. STRICTA Collins Setchell & Gardner, 1920 San Diego, Calif.
- CLADOPHORA OVOIDEA Kützing Smith, 1944 Santa Cruz to Monterey, Calif.
- Cladophora panamensis Taylor Taylor, 1945 Bahía Honda, Panamá
- CLADOPHORA PROLIFERA (Roth) Kützing Taylor, 1945 Golfo Dulce, Costa Rica
- CLADOPHORA RUDOLPHIANA (C. Agardh) Kützing Dawson, 1944 Guaymas, Sonora
- CLADOPHORA RUDOLPHIANA f. ERAMOSA Gardner Setchell & Gardner, 1920; Dawson, 1944 San Francisco Bay, Calif.; Guaymas, Sonora
- CLADOPHORA STIMPSONII Harvey Setchell & Gardner, 1920 Ucluet Inlet, B. C. to southern Calif.
- CLADOPHORA TIBURONENSIS Dawson Dawson, 1944 Is. Tiburón, Gulf of Calif.

CLADOPHORA TRICHOTOMA (C. Agardh) Kützing Smith, 1944; Dawson, 1944; 1945Е Vancouver Is., B. C. to Punta Descanso, Baja Calif.; La Paz, Baja Calif.?

CLADOPHORA TRICHOTOMA f. ELONGATA Collins Setchell & Gardner, 1920 Point Carmel, Calif.

Spongomorpha arcta (Dillwyn) Kützing Setchell & Gardner, 1920 Bering Sea to Puget Sound, Wash.

Spongomorpha coalita (Ruprecht) Collins Smith, 1944 Unalaska, Alaska to Carmel, Calif.

Spongomorpha duriuscula (Ruprecht) Collins Setchell & Gardner, 1920 Unalaska; Karluk, Alaska

Spongomorpha hystrix Stroemfelt Setchell & Gardner, 1920 Agattu Is. to Sitka, Alaska

Spongomorpha Mertensii (Ruprecht) Setchell & Gardner Setchell & Gardner, 1920 Unalaska, Alaska to San Francisco, Calif.

Spongomorpha Saxatilis (Ruprecht) Collins Setchell & Gardner, 1920 Alaska to San Francisco, Calif.

Spongomorpha saxatilis var. Chamissonis (Ruprecht)
Collins
Setchell & Gardner, 1920
Alaska to Washington

Spongomorpha spinescens Kützing Setchell & Gardner, 1920 Unalaska to Coos Bay, Oregon

Microdictyon Palmeri Setchell Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

Fam. Valoniaceae

DICTYOSPHAERIA AUSTRALIS Setchell
Taylor, 1945
Is. Clarion; Is. Socorro, Revilla Gigedo Arch.

Dictyosphaeria Versluysi Weber van Bosse Setchell & Gardner, 1930; Dawson, 1944; Taylor, 1945 Is. Guadalupe, Baja Calif.; Is. Espiritu Santo, Gulf of Calif.; Is. Socorro, Revilla Gigedo Arch.

CLADOPHOROPSIS ROBUSTA Setchell & Gardner Dawson, 1944; Taylor, 1945 Is. Tortuga, Gulf of Calif.; Is. Isabel, Nayarit

Boodlea composita (Harvey & Hooker, f.) Brand Taylor, 1945 Is. María Magdalena, Nayarit

Valoniopsis Hancockii Dawson Dawson, 1944 Is. Angel de la Guarda, Gulf of Calif.

Valoniopsis pachynema (Martens) Børgesen Dawson, 1944 Is. Angel de la Guarda to Is. Espíritu Santo, Gulf of Calif.

Siphonocladus pusilloides Setchell & Gardner Setchell & Gardner, 1930
Is. Guadalupe, Baja Calif.

Fam. Dasycladaceae

Acetabularia parvula Solms-Laubach Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

Acetabularia parvula var. americana Taylor Taylor, 1945 Is. Socorro, Revilla Gigedo Arch.

Neomeris Vanbosseae Howe Taylor, 1945 Is. Socorro, Revilla Gigedo Arch.

Order CHLOROCOCCALES

Fam. Endosphaeraceae

Chlorochytrium inclusum Kjellman Smith, 1944 Sitka, Alaska to Carmel, Calif.

Chlorochytrium Porphyrae Setchell & Gardner Smith, 1944
Cape Flattery, Wash.; San Francisco; Monterey Peninsula, Calif.

Chlorochytrium Schmitzii Rosenvinge Setchell & Gardner, 1920 Kodiak Is., Alaska

Codiolum gregarium A. Braun Setchell & Gardner, 1920 Friday Harbor, Wash.

Codiolum Petrocelidis Kuckuck Smith, 1944 Whidbey Is., Wash.; San Francisco; Monterey, Calif.

Codiolum pusillum f. subsessile Jao Jao, 1937 Brown Is., Wash.

Order SIPHONALES

Fam. Halicystidaceae

Halicystis ovalis (Lyngbye) Areschoug Smith, 1944 Vancouver Is., B. C. to Redondo, Calif.

Fam. Bryopsidaceae

Bryopsis corticulans Setchell Smith, 1944; Dawson, 1945B Victoria, B. C. to La Jolla, Calif.

Bryopsis Galapagensis Taylor Taylor, 1945 Is. Socorro; Is. Clarion, Revilla Gigedo Arch.

Bryopsis hypnoides Lamouroux Smith, 1944; Taylor, 1945 Victoria, B. C. to San Pedro, Calif.; Panamá City, Panamá

Bryopsis pennatula J. Agardh Setchell & Gardner, 1920; Taylor, 1945 San Agustin, Oaxaca; Bahía Petatlán, Guerrero

Bryopsis Plumosa (Hudson) C. Agardh Setchell & Gardner, 1920 Friday Harbor, Wash.

Bryopsis plumosa var. pennata (Lamouroux) Børgesen Dawson, 1944 Is. Tiburón, Gulf of Calif.

Fam. Derbesiaceae

Derbesia Lamourouxii (J. Agardh) Solier Setchell & Gardner, 1920 On the coast near Tijuana, Baja Calif.

Derbesia Marina (Lyngbye) Kjellman Smith, 1944 Sitka, Alaska to San Diego, Calif.

Derbesia pacifica Jao Jao, 1937 Turn Is., Wash.

Derbesia vaucheriaeformis (Harvey) J. Agardh Jao, 1937 Whidbey, Is., Wash.

Fam. Vaucheriaceae

Vaucheria Litoria Bang & C. Agardh Jao, 1937 San Juan Is., Wash.

Fam. Phyllosiphonaceae

Ostreobium Quekettii Bornet & Flahault Jao, 1937; Taylor, 1945 Puget Sound, Wash.; Is. Clarion, Revilla Gigedo Arch.

Ostreobium Reineckei Bornet Setchell & Gardner, 1930; Taylor, 1945 Is. Guadalupe, Baja Calif.; Is. Clarion, Revilla Gigedo Arch.

Fam. Caulerpaceae

Caulerpa peltata (Turner) Lamouroux Taylor, 1945 Tangola-Tangola, Oaxaca

Caulerpa pinnata f. pectinata (Kützing) Weber van Bosse Dawson, 1944 Is. Angel de la Guarda, Gulf of Calif.

Caulerpa racemosa var. chemnitzia (Esper) Weber van Bosse Dawson, 1944 Bahía Agua Verde, Baja Calif.

Caulerpa racemosa var. clavifera f. macrophysa (Kützing) Weber van Bosse
Setchell & Gardner, 1930
Is. Guadalupe, Baja Calif.

Caulerpa racemosa var. laetevirens f. cylindraceae (Sonder) Weber van Bosse Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

Caulerpa racemosa var. laetevirens f. typica Weber van Bosse

Setchell & Gardner, 1930; Taylor, 1945

Is. Guadalupe, Baja Calif.; İs. Clarion, Revilla Gigedo Arch.

Caulerpa racemosa var.occidentalis (C. Agardh) Børgesen Taylor, 1945 Is. Clarion, Revilla Gigedo Arch.

Caulerpa racemosa var. uvifera (Turner) Weber van Bosse

Dawson, 1944

Is. Espíritu Santo, Gulf of Calif.

Caulerpa sertularioides (Gmelin) Howe Dawson, 1944; Taylor, 1945 Is. Espíritu Santo, Gulf of Calif.; Tangola-Tangola. Oaxaca

CAULERPA VANBOSSEAE Setchell & Gardner Dawson, 1944

Is. Angel de la Guarda to Is. Espíritu Santo, Gulf of Calif.

Fam. Codiaceae

Codium amplivesiculatum Setchell & Gardner Dawson, 1944
Pond Is., Gulf of Calif.

Codium anastomosans Setchell & Gardner Dawson, 1944 Is. Angel de la Guarda to Is. Tiburón, Gulf of Calif.

Codium conjunctum Setchell & Gardner Dawson, 1944 Is. Tortuga, Gulf of Calif.

Codium cuneatum Setchell & Gardner Dawson, 1944
Vicinity of Smith Is., Gulf of Calif.

Codium decorticatum (Woodward) Howe Setchell, 1933; Taylor, 1939 Bahía Magdalena, Baja Calif. ? Codium fernandezianum Setchell Taylor, 1945 Bahía Santa María, Baja Calif.

Codium fragile (Suringar) Hariot Smith, 1944; Taylor, 1945; Dawson, 1945E Alaska to Puerto San Bartolomé, Baja Calif.

Codium isabelae Taylor Taylor, 1945 Is. Clarion, Revilla Gigedo Arch.

Codium Longiramosum Setchell & Gardner Dawson, 1944; Taylor, 1945 Pond Is., Gulf of Calif.; Is. Clarion; Is. Socorro, Revilla Gigedo Arch.; Bahía Petatlán, Guerrero

Codium Macdougalii Dawson Dawson, 1944 Puerto Libertad, Sonora

Codium Palmeri Dawson Dawson, 1945C Is. Guadalupe, Baja Calif.

Codium Setchellii Gardner Smith, 1944; Taylor, 1945 Sitka, Alaska to Carmel, Calif.; Is. Jacarita, Panamá?

Codium simulans Setchell & Gardner Setchell & Gardner, 1930; Dawson, 1944; 1945C La Jolla, Calif. to Is. Clarion, Revilla Gigedo Arch.; Gulf of Calif.

Codium Ritteri Setchell & Gardner Setchell & Gardner, 1920 Kodiak Is., Alaska to Vancouver Is., B. C.

Halimeda discoidea Decaisne Dawson, 1944; Taylor, 1945 Is. Angel de la Guarda, Gulf of Calif. to Golfo Dulce, Costa Rica

Halimeda Opuntia (Linnaeus) Lamouroux Setchell & Gardner, 1930; Taylor, 1945 Is. Guadalupe, Baja Calif.; Clarion, Revilla Gigedo Arch.

Halimeda Tuna (Ellis & Solander) Lamouroux Taylor, 1945 Is. Clarion, Revilla Gigedo Arch.

Chlorodesmis mexicana Taylor
Taylor, 1945; Chlorodesmis comosa in Setchell & Gardner, 1930
Is. Guadalupe, Baja Calif. to Tangola-Tangola, Oaxaca

PHAEOPHYCEAE

(BROWN ALGAE)

Order ECTOCARPALES

Fam. Ectocarpaceae

Pylaiella Gardneri Collins Smith, 1944 San Francisco to Carmel, Calif.

Pylaiella littoralis (Linnaeus) Kjellman Smith, 1944 Bering Sea to San Pedro, Calif.

Pylaiella tenella Setchell & Gardner Smith, 1944 Neah Bay, Wash.; Monterey, Calif.

Pylaiella Unilateralis Setchell & Gardner Setchell & Gardner, 1925 Coos Bay, Oregon

Pylaiella washingtonensis Jao Jao, 1937 Seattle, Wash.

Ectocarpus acuminatus Saunders Smith, 1944 Pacific Grove to San Pedro, Calif.

Ectocarpus acutus Setchell & Gardner Smith, 1944
Puget Sound to Carmel, Calif.

Ectocarpus affinis Setchell & Gardner Setchell & Gardner, 1925 Sitka, Alaska

Ectocarpus Breviarticulatus J. Agardh Setchell & Gardner, 1925; 1930 Is. Guadalupe, Baja Calif.; San Agustin, Oaxaca

Ectocarpus Bryantii Setchell & Gardner Dawson, 1944 La Paz, Baja Calif.

Ectocarpus Chantransioides Setchell & Gardner Setchell & Gardner, 1925 Santa Monica, Calif.

Ectocarpus chitonicola Saunders Smith, 1944 Monterey Peninsula, Calif.

Ectocarpus commensalis Setchell & Gardner Smith, 1944
Monterey Peninsula, Calif.

Ectocarpus confervoides (Roth) Le Jolis Setchell & Gardner, 1925 Yakutat Bay, Alaska to Whidbey Is., Wash.

Ectocarpus confervoides f. parvus (Saunders) Setchell & Gardner Setchell & Gardner, 1925
San Francisco to San Diego, Calif.

Ectocarpus confervoides f. pygmaeus (Areschoug) Kjellman Smith, 1944; Dawson, 1945E Shumagin Is., Alaska to Carmel, Calif.; Punta Descanso, Baja Calif.

Ectocarpus confervoides f. typicus Kuckuck Setchell & Gardner, 1925 Juneau, Alaska to San Francisco, Calif.

Ectocarpus corticulatus Saunders Smith, 1944 Popof Is., Alaska to San Pedro, Calif.

Ectocarpus cylindricus Saunders Smith, 1944 Monterey Peninsula, Calif.

Ectocarpus cylindricus f. codiophilus Setchell & Gardner Smith, 1944; Dawson, 1945B Monterey Peninsula; La Jolla, Calif.

Ectocarpus Duchassaingianus Grunow Setchell & Gardner, 1930; Taylor, 1945 Is. Guadalupe, Baja Calif.; Is. María Magdalena, Nayarit; Is. Socorro, Revilla Gigedo Arch.

Ectocarpus ellipticus Saunders Smith, 1944 Monterey Peninsula, Calif.

Ectocarpus ensenadanus Gardner Gardner, 1940 Ensenada, Baja Calif.

Ectocarpus eramosus Setchell & Gardner Setchell & Gardner, 1925 Tomales Bay, Calif.

- Ectocarpus flagelliferus Setchell & Gardner Setchell & Gardner, 1925 Sitka, Alaska
- Ectocarpus flocculiformis Setchell & Gardner Setchell & Gardner, 1925 La Jolla, Calif.
- Ectocarpus fructuosus Setchell & Gardner Setchell & Gardner, 1925 Moss Beach, San Mateo Co., Calif.
- Ectocarpus globifer Kützing Setchell & Gardner, 1925 San Pedro to La Jolla, Calif.
- Ectocarpus gonodioides Setchell & Gardner Smith, 1944; Dawson, 1944 Carmel, Calif.; Smith Is., Gulf of Calif.
 - Ectocarpus granulosoides Setchell & Gardner Smith, 1944; Dawson, 1945B Monterey to La Jolla, Calif.
 - Ectocarpus granulosoides var. pygmaeus Setchell & Gardner ner Setchell & Gardner, 1937 Is. San Martin, Baja Calif.
 - Ectocarpus granulosus (J. E. Smith) C. Agardh Smith, 1944; Dawson, 1945B; 1945E Puget Sound, Wash. to Punta Descanso, Baja Calif.
 - Ectocarpus Hancockii Dawson Dawson, 1944 Turner's Is., Gulf of Calif.
 - Ectocarpus hemisphericus Saunders Setchell & Gardner, 1925 San Pedro to San Diego, Calif.
 - Ectocarpus Hemisphericus f. minor Saunders Setchell & Gardner, 1925; Dawson, 1945B Southern Calif.
 - Ectocarpus isopodicola Dawson Dawson, 1946 Newport Bay, Calif.
 - Ectocarpus luteolus Sauvageau Setchell & Gardner, 1925 San Francisco, Calif.

Ectocarpus Mesogloiae Setchell & Gardner Smith, 1944 Carmel, Calif.

Ectocarpus Mitchellae Harvey Setchell & Gardner, 1925; Dawson, 1944 Southern Calif. to San Jose del Cabo, Baja Calif.; Punta Peñasco, Sonora

Ectocarpus mucronatus Saunders Setchell & Gardner, 1925; Dawson, 1944 Vancouver Is., B. C. to San Pedro, Calif.; Punta Peñasco, Sonora

Ectocarpus oviger Harvey Smith, 1944 Puget Sound to Carmel, Calif.

Ectocarpus Parksii Setchell & Gardner Setchell & Gardner, 1925 San Francisco Bay, Calif.

Ectocarpus Saundersii Setchell & Gardner Smith, 1944 Monterey Peninsula, Calif.

Ectocarpus siliculosus (Dillwyn) Lyngbye Setchell & Gardner, 1925; Sanborn & Doty, 1946 Coos Bay, Oregon to San Francisco Bay, Calif.

Ectocarpus siliculosus f. subulatus (Kützing) Setchell & Gardner Setchell & Gardner, 1925 San Francisco Bay, Calif.

Ectocarpus simulans Setchell & Gardner Smith, 1944
Monterey, Calif.

Ectocarpus socialis Setchell & Gardner Setchell & Gardner, 1925; Dawson, 1945B Southern Calif.

Ectocarpus sonorensis Dawson Dawson, 1944 Guaymas, Sonora

Ectocarpus Taoniae Setchell & Gardner Setchell & Gardner, 1925 San Pedro, Calif.

Ectocarpus terminalis Kützing Setchell & Gardner, 1925 Unalaska, Alaska to Laguna Beach, Calif.

- Ectocarpus tomentosus (Hudson) Lyngbye Smith, 1944 Kodiak Is., Alaska to Laguna Beach, Calif.
- Ectocarpus variabilis (Saunders) G. M. Smith Smith, 1944; Dawson, 1945E; Ectocarpus confervoides f. variabilis in Dawson, 1944 Puget Sound, Wash. to Punta Descanso, Baja Calif.; Is. Tiburón, Gulf of Calif.
- Streblonema Aecidioides f. pacificum Setchell & Gardner Setchell & Gardner, 1925 Neah Bay, Wash.
- Streblonema anomalum Setchell & Gardner Smith, 1944 Monterey; San Pedro, Calif.
- Streblonema codicola Setchell & Gardner Setchell & Gardner, 1930
 Is. Guadalupe, Baja Calif.
- Streblonema corymbiferum Setchell & Gardner Smith, 1944 Monterey; San Pedro, Calif.
- Streblonema Desmarestiae Gardner Gardner, 1940 San Juan Is., Wash.
- Streblonema evagatum Setchell & Gardner Smith, 1944
 Monterey, Calif.
- Streblonema investions (Collins) Setchell & Gardner Setchell & Gardner, 1925; Dawson, 1945B San Pedro to La Jolla, Calif.
- Streblonema irregulare Saunders Setchell & Gardner, 1925 Sitka, Alaska
- Streblonema Johnstonae Setchell & Gardner Setchell & Gardner, 1925 San Pedro, Calif.
- Streblonema minutissium Saunders Setchell & Gardner, 1925 Sitka, Alaska
- Streblonema Myrionematoides Setchell & Gardner Setchell & Gardner, 1925
 Moss Beach, San Mateo Co., Calif.

Streblonema Pacificum Saunders Setchell & Gardner, 1925 Yakutat Bay, Alaska to San Francisco Bay, Calif.

STREBLONEMA PENETRALE Setchell & Gardner Smith, 1944
Pacific Grove, Calif.

Streblonema Porphyrae Setchell & Gardner Smith, 1944
Monterey Peninsula, Calif.

Streblonema Rugosum Setchell & Gardner Setchell & Gardner, 1925 Friday Harbor, Wash.

Streblonema scabiosum Setchell & Gardner Setchell & Gardner, 1925
San Francisco, Calif.

Streblonema transfixum Setchell & Gardner Setchell & Gardner, 1925 San Pedro, Calif.

Streblonema vorax Setchell & Gardner Setchell & Gardner, 1925 Sitka, Alaska

Fam. Ralfsiaceae

Ralfsia californica Setchell & Gardner Setchell & Gardner, 1925; Dawson, 1944; Taylor, 1945 Central Calif.; Is. Tiburón to Is. Espíritu Santo, Gulf of Calif.; Bahía Tenacatita, Jalisco

RALFSIA CLAVATA (Carmichael) Crouan Setchell & Gardner, 1925 Unalaska Bay, Alaska

Ralfsia fungiformis (Gunnerus) Setchell & Gardner Setchell & Gardner, 1925; Sanborn & Doty, 1946 Bering Sea to Coos Bay, Oregon

Ralfsia Hancockii Dawson Dawson, 1944 San Jose del Cabo, Baja Calif.

Ralfsia Hesperia Setchell & Gardner Smith, 1944 Carmel; Corona del Mar, Calif.

RALFSIA OCCIDENTALIS Hollenberg
Taylor, 1945
Is. Socorro, Revilla Gigedo Arch.

RALFSIA PACIFICA Hollenberg (ms)
Smith, 1944; Dawson, 1944
Unalaska, Alaska to Baja Calif.; northern Gulf of Calif.

Hapterophycus canaliculatus Setchell & Gardner Hollenberg, 1941 Redondo, Calif. to Punta Banda, Baja Calif.

LITHODERMA FATISCENS Areschoug Setchell & Gardner, 1925 Bering Sea; Unalaska, Alaska

Hapalospongidion gelatinosum Saunders Hollenberg, 1942; Smith, 1944 Carmel, Calif. to Punta Banda, Baja Calif.; Bahía Petatlán, Guerrero

Fam. Elachistaceae

HALOTHRIX LUMBRICALIS (Kützing) Reinke Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

ELACHISTEA FUCICOLA (Velley) Areschoug Setchell & Gardner, 1925 Sitka, Alaska to Coos Bay, Oregon

ELACHISTEA LUBRICA Ruprecht Setchell & Gardner, 1925 Prince William Sound to Wrangell, Alaska

Gonodia Johnstonii Setchell & Gardner Dawson, 1944 Is. San Marcos, Gulf of Calif.

Gonodia Marchantae Setchell & Gardner Dawson, 1944 La Paz, Baja Calif.

Fam. Sphacelariaceae

Sphacelaria brevicorne Setchell & Gardner Dawson, 1944; Setchell & Gardner, 1925 La Paz and vicinity, Baja Calif.

Sphacelaria californica Sauvageau Setchell & Gardner, 1925 San Pedro to San Diego, Calif.

Sphacelaria didichotoma Saunders Smith, 1944 Monterey to southern Calif. Sphacelaria furcigera Kützing Setchell & Gardner, 1930; Dawson, 1944 Is. Tiburón, Gulf of Calif.; Is. Guadalupe; La Paz, Baja Calif.

Sphacelaria Hancockii Dawson
Dawson, 1944
Turner's Is., Gulf of Calif.; San Jose del Cabo, Baja
Calif.

Sphacelaria Masonii Setchell & Gardner Setchell & Gardner, 1930 Is. Clarion, Revilla Gigedo Arch.

Sphacelaria Mexicana Taylor Taylor, 1945 Is. Socorro, Revilla Gigedo Arch.

Sphacelaria novae-hollandiae Sonder Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

Sphacelaria racemosa Greville Setchell & Gardner, 1925 Bering Sea to Whidbey Is., Wash.

SPHACELARIA SUBFUSCA Setchell & Gardner Setchell & Gardner, 1925
Sitka, Alaska to Redondo, Calif.

Order CUTLERIALES

Fam. Cutleriaceae

Cutleria Hancockii Dawson Dawson, 1944 Is. Tiburón, Gulf of Calif.

Order TILOPTERIDALES

Fam. Tilopteridaceae

Masonophycus paradoxa Setchell & Gardner Setchell & Gardner, 1930
Is. Clarion, Revilla Gigedo Arch.

Order DICTYOTALES

Fam. Dictyotaceae

DICTYOTA BINGHAMIAE J. Agardh Setchell & Gardner, 1925; Taylor, 1945 Southern Calif. to Bahía San Bartolomé, Baja Calif. Is. Secas, Panamá

DICTYOTA CONCRESCENS Taylor Taylor, 1945 Cabo San Lazaro, Baja Calif.

DICTYOTA CRENULATA J. Agardh Dawson, 1944; Taylor, 1945 Cape district, Baja Calif. to Puerto Culebra, Costa Rica

DICTYOTA CRIBROSA Setchell & Gardner Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

DICTYOTA DIVARICATA Lamouroux, prox.

Taylor, 1945 Is. Socorro, Revilla Gigedo Arch.; Bahía Tenacatita, Talisco

DICTYOTA FLABELLATA (Collins) Setchell & Gardner Smith, 1944; Taylor, 1945 Monterey to La Jolla, Calif.; Puerto Culebra, Costa Rica: Is. Secas, Panamá

DICTYOTA HESPERIA Setchell & Gardner Dawson, 1944 Northern Gulf of Calif.

Dістуота Johnstonii Setchell & Gardner Dawson, 1944 Northern Gulf of Calif.

DICTYOTA MASONII Setchell & Gardner Setchell & Gardner, 1930 Is. Clarion, Revilla Gigedo Arch.

DICTYOTA VIVESII Howe

Dawson, 1944; Taylor, 1945 Punta Gorda; Cabo San Lazaro, Baja Calif.; Is. María Magdalena, Nayarit

DICTYOPTERIS DELICATULA Lamouroux Taylor, 1939; 1945; Neurocarpus delicatula in Setchell & Gardner, 1925 Is. Clarion; Is. Socorro, Revilla Gigedo Arch.; Clipper-

ton Is.

DICTYOPTERIS JOHNSTONEI Gardner Gardner, 1940 Santa Catalina Is., Calif.

DICTYOPTERIS ZONARIOIDES Farlow

Neurocarpus zonarioides in Setchell & Gardner, 1925;
Dawson, 1944

Southern Calif. to San Jose del Cabo, Baja Calif.; northern Gulf of Calif.

TAONIA LENNEBACKERAE Farlow Setchell & Gardner, 1925; Taylor, 1945 Southern Calif. to Bahía San Bartolomé, Baja Calif.

Syringoderma abyssicola (Setchell & Gardner) Levring Levring, 1940; Chlanidophora abyssicola in Setchell & Gardner, 1925 San Juan Is., Wash.

Zonaria Farlowii Setchell & Gardner Setchell & Gardner, 1925; 1930; Taylor, 1945 Southern Calif. to Bahía Santa María, Baja Calif.

Pocockiella variegata (Lamouroux) Papenfuss Taylor, 1945; Zonaria variegata in Taylor, 1939 Is. Clarion; Is. Socorro, Revilla Gigedo Arch.; Clipperton Is.

Padina Durvillaei Bory Dawson, 1944; Taylor, 1945 Is. Cedros, Baja Calif. to Panamá

Padina caulescens Thivy Taylor, 1945 Is. María Magdalena, Nayarit

Padina crispata Thivy
- Taylor, 1945
Is. María Madre, Nayarit; Golfo Dulce, Costa Rica;
Bahía Honda, Panamá

Padina Mexicana Dawson Dawson, 1944 Turner's Is., Gulf of Calif.

Padina tetrastromatica Hauck Setchell & Gardner, 1930 Is. María Madre, Nayarit?

Order CHORDARIALES

Fam. Corynophloeaceae

Petrospongium Rugosum (Okamura) Setchell & Gardner Smith, 1944 San Mateo Co. to San Diego, Calif.

Leathesia difformis (Linnaeus) Areschoug Smith, 1944 Bering Sea to San Pedro, Calif.

Leathesia nana Setchell & Gardner Smith, 1944
Monterey Peninsula, Calif.

Fam. Myrionemataceae

Myrionema attenuatum Setchell & Gardner Smith, 1944 Monterey Peninsula, Calif.

Myrionema Balticum f. californicum Setchell & Gardner Smith, 1944 Monterey Peninsula, Calif.

Myrionema Balticum f. Pedicellatum Setchell & Gardner Setchell & Gardner, 1925
Point Carmel, Calif.

Myrionema compsonematoides Setchell & Gardner Setchell & Gardner, 1925 Friday Harbor, Wash.

Myrionema corunnae f. angulatum Setchell & Gardner Setchell & Gardner, 1925 San Francisco, Calif.

Myrionema corunnae f. sterile Setchell & Gardner Smith, 1944 Carmel, Calif.

Myrionema corunnae f. uniforme Setchell & Gardner Setchell & Gardner, 1925
San Mateo Co., Calif.

Myrionema foecundum f. ramulosum Setchell & Gardner Setchell & Gardner, 1925 Friday Harbor, Wash.

Myrionema foecundum f. simplicissimum Setchell & Gardner ner Setchell & Gardner, 1925 Kodiak Is., Alaska to central California

Myrionema foecundum f. subulatum Setchell & Gardner Setchell & Gardner, 1925 San Francisco, Calif.

Myrionema globosum f. affine Setchell & Gardner Setchell & Gardner, 1925
Sitka, Alaska to Point Carmel, Calif.

Myrionema minutissimum Setchell & Gardner Setchell & Gardner, 1925 San Francisco, Calif.

Myrionema obscurum Setchell & Gardner Setchell & Gardner, 1925
Moss Beach, San Mateo Co., Calif.

Myrionema рнуцорнуцим Setchell & Gardner Setchell & Gardner, 1925 Sitka, Alaska

Myrionema primarium Setchell & Gardner Smith, 1944
Alaska to Carmel, Calif.

Myrionema setiferum Setchell & Gardner Setchell & Gardner, 1925 Sitka, Alaska

Myrionema strangulans Greville Smith, 1944 Sitka, Alaska to Carmel, Calif.

Compsonema coniferum Setchell & Gardner Smith, 1944
Monterey Peninsula, Calif.

Compsonema dubium Setchell & Gardner Smith, 1944
Monterey Peninsula, Calif.

Compsonema fasciculatum Setchell & Gardner Smith, 1944
Pacific Grove, Calif.

Compsonema fructuosum Setchell & Gardner Setchell & Gardner, 1925
Tomales Bay, Calif.

Compsonema immixtum Setchell & Gardner Dawson, 1944
Is. Partida, Gulf of Calif.

- Compsonema intricatum Setchell & Gardner Smith, 1944
 Carmel, Calif.
- Compsonema myrionematoides Setchell & Gardner Smith, 1944
 Pacific Grove, Calif.
- Compsonema nummuloides Setchell & Gardner Setchell & Gardner, 1925 Moss Beach, San Mateo Co., Calif.
- Compsonema pusillum Setchell & Gardner Smith, 1944
 Carmel, Calif.
- Compsonema ramulosum Setchell & Gardner Smith, 1944
 Carmel, Calif.
- Compsonema secundum Setchell & Gardner Smith, 1944
 Moclips, Wash. to Carmel, Calif.
- Compsonema serpens Setchell & Gardner Smith, 1944
 Monterey Peninsula, Calif.
- Compsonema sessile Setchell & Gardner Setchell & Gardner, 1925 Neah Bay, Wash.
- Compsonema speciosum f. piliferum Setchell & Gardner Setchell & Gardner, 1925 Moclips, Wash.
- Compsonema sporangiiferum Setchell & Gardner Setchell & Gardner, 1925 Neah Bay, Wash.
- Compsonema streblonematoides Setchell & Gardner Setchell & Gardner, 1925 Tomales Bay, Calif.
- Compsonema tenue Setchell & Gardner Setchell & Gardner, 1925 Sitka, Alaska

Fam. Chordariaceae

Aegira virescens (Carmichael) Setchell & Gardner Setchell & Gardner, 1925; Dawson, 1945 Shumagin Is. to Sitka, Alaska; La Jolla, Calif. Haplogloia Andersonii (Farlow) Levring Smith, 1944; Dawson, 1945E Sitka, Alaska to Cabo Colnett, Baja Calif.

Haplogloia Kuckuckii Kylin Kylin, 1940 Sitka, Alaska to Friday Harbor, Wash.

Chordaria dissessa Setchell & Gardner Setchell & Gardner, 1925 Orcas Is., Wash.

CHORDARIA FLAGELLIFORMIS (Müller) C. Agardh Setchell & Gardner, 1925 Bering Sea to Sitka, Alaska

Chordaria Gracilis Setchell & Gardner Setchell & Gardner, 1925 Amaknak Is., Alaska

Saundersella simplex (Saunders) Kylin Kylin, 1940 Cook Inlet, Alaska to Vancouver, B. C.

Fam. Heterochordariaceae

HETEROCHORDARIA ABIETINA (Ruprecht) Setchell & Gardner Smith, 1944
Bering Sea to Point Conception, Calif.

Fam. Spermatochnaceae

Nemacystus Brandegeei (Setchell & Gardner) Kylin Dawson, 1944 Punta Peñasco, Sonora; La Paz, Baja Calif.

Order SPOROCHNALES

Fam. Sporochnaceae

Sporochnus pedunculatus (Hudson) C. Agardh Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

Order **DESMARESTIALES**

Fam. Desmarestiaceae

Desmarestia farcta Setchell & Gardner Setchell & Gardner, 1925 Argyle, San Juan Co., Wash.

- Desmarestia filamentosa Dawson
 Dawson, 1944
 Is. Angel de la Guarda, Gulf of Calif.
- Desmarestia foliacea Pease Setchell & Gardner, 1925 San Juan Co., Wash.
- Desmarestia Herbacea (Turner) Lamouroux Smith, 1944; Setchell & Gardner, 1930; Taylor, 1945; Dawson, 1945E Kodiak Is., Alaska to Is. Cedros, Baja Calif.
- Desmarestia intermedia Postels & Ruprecht Setchell & Gardner, 1925 Bering Sea to Puget Sound, Wash.
- Desmarestia Jordanii Gardner Gardner, 1940 Ventura, Calif.
- Desmarestia latifrons (Ruprecht) Kützing Smith, 1944 Coos Bay, Oregon to Point Sur, Calif.
- Desmarestia latissima Setchell & Gardner Setchell & Gardner, 1925 San Juan Co., Wash.
- Desmarestia Ligulata (Lightfoot) Lamouroux Setchell & Gardner, 1925 San Juan Is., Wash.
- Desmarestia linearis Gardner Smith, 1944 Monterey Peninsula, Calif.
- Desmarestia media (C. Agardh) Greville Setchell & Gardner, 1925 Unalaska, Alaska
- Desmarestia media var. tenuis Setchell & Gardner Setchell & Gardner, 1925 Juneau, Alaska to Puget Sound, Wash.
- Desmarestia mexicana Dawson
 Dawson, 1944
 Is. Angel de la Guarda, Gulf of Calif.
- Desmarestia munda Setchell & Gardner Smith, 1944; Dawson, 1945A Puget Sound, Wash. to Is. Cedros, Baja Calif.

Desmarestia pacifica Setchell & Gardner Setchell & Gardner, 1925; 1930 Santa Catalina Is, Calif.; Is. Guadalupe, Baja Calif.?

Desmarestia viridis (Müller) Lamouroux Smith, 1944 Carmel, Calif.

Order PUNCTARIALES

Fam. Punctariaceae

Punctaria chartacea Setchell & Gardner Setchell & Gardner, 1925 Sitka, Alaska

Punctaria expansa Setchell & Gardner Setchell & Gardner, 1925 Whidbey Is., Wash.

Punctaria Hesperia Setchell & Gardner Smith, 1944 Victoria, B. C.; Monterey; San Pedro, Calif.

Punctaria latifolia Greville Setchell & Gardner, 1925 Metlacatla; Baranoff Is., Alaska

Punctaria lobata (Saunders) Setchell & Gardner Setchell & Gardner, 1925 Prince William Sound to Sitka, Alaska

Punctaria occidentalis Setchell & Gardner Smith, 1944
Monterey, Calif.

Punctaria orbiculata Jao Jao, 1937 San Juan Is., Wash.

Punctaria plantaginea Greville Saunders, 1901; Setchell & Gardner, 1925 Yakutat Bay, Alaska?

Halorhipis Winstonii (Anderson) Saunders Smith, 1944 Monterey Peninsula, Calif.

Fam. Asperococcaceae

Soranthera ulvoidea Postels & Ruprecht Smith, 1944 Unalaska, Alaska to southern Calif. Soranthera ulvoidea f. difformis Setchell & Gardner Setchell & Gardner, 1925
Bering Sea to Cape Flattery, Wash.

Myelophycus intestinale Saunders Setchell & Gardner, 1925 Shumagin Is., Alaska to Puget Sound, Wash.

Myelophycus intestinale f. tenue Setchell & Gardner Setchell & Gardner, 1925 Coos Bay, Oregon to central Calif.

Fam. Scytosiphonaceae

Scytosiphon Lomentaria (Lyngbye) J. Agardh Smith, 1944; Dawson, 1945E Bering Sea to Punta Descanso, Baja Calif.

Scytosiphon Lomentaria f. cylindricus maculatus Setchell & Gardner Setchell & Gardner, 1925 San Francisco, Calif.

Scytosiphon Lomentaria f. typica Rosenvinge Smith, 1944; Dawson, 1945E Bering Sea to Punta Descanso, Baja Calif.

Scytosiphon Lomentaria var. complanatus Rosenvinge Smith, 1944 Cape Arago, Oregon to Carmel, Calif.

ILEA FASCIA (Müller) Fries Smith, 1944; Dawson, 1945E Unalaska, Alaska to Cabo Colnett, Baja Calif.

ILEA FASCIA f. CAESPITOSA Setchell & Gardner Setchell & Gardner, 1925 Alaska

ILEA FASCIA f. DEBILIS Setchell & Gardner Setchell & Gardner, 1925 San Juan Is., Wash.

ILEA FASCIA f. TYPICA Setchell & Gardner Setchell & Gardner, 1925 Puget Sound, Wash. to southern Calif.

ILEA FASCIA f. ZOSTERIFOLIA Setchell & Gardner Smith, 1944
Monterey Peninsula, Calif.

ENDARACHNE BINGHAMIAE J. Agardh Setchell & Gardner, 1925 Southern Calif. to Ensenada, Baja Calif. Colpomenia Ramosa Taylor

Taylor, 1945

Is. Cedros, Baja Calif.; Bahía Salinas; Port Parker, Costa Rica

Colpomenia sinuosa (Roth) Derbés & Solier Setchell & Gardner, 1925; 1930; Smith, 1944; Dawson, 1944; Taylor, 1945 Yakutat Bay, Alaska to Port Parker, Costa Rica

Colpomenia sinuosa f. deformans Setchell & Gardner Setchell & Gardner, 1925; Dawson, 1944; Taylor, 1945; Scytosiphon bullosus in Smith, 1944. Cook Inlet, Alaska to Bahía San Bartolomé, Baja Calif.; Gulf of Calif.

Colpomenia sinuosa f. expansa Saunders Setchell & Gardner, 1925 Avalon, Santa Catalina Is., Calif.

Colpomenia sinuosa f. tuberculata (Saunders) Setchell & Gardner Setchell & Gardner, 1925; Dawson, 1944 Unalaska, Alaska to La Paz, Baja Calif.; Gulf of Calif.

Rosenvingea intricata (J. Agardh) Børgesen Dawson, 1944; Taylor, 1945 Bahía Tepoca, Sonora to Is. Socorro, Revilla Gigedo Arch.

Hydroclathrus clathratus (Bory) Howe Dawson, 1944; 1945B Southern Calif. to central México; southern Gulf of Calif.

Fam. Coilodesmaceae

Coilodesme Bulligera Stroemfelt Setchell & Gardner, 1925 Shumagin Is., Alaska to Coos Bay, Oregon

Coilodesme californica (Ruprecht) Kjellman Smith, 1944; Connell, 1928; Dawson, 1945C Departure Bay, B. C. to La Jolla, Calif.

Coilodesme corrugata Setchell & Gardner Setchell & Gardner, 1925 Santa Catalina Is., Calif.

Coilodesme Cystoseirae (Ruprecht) Setchell & Gardner Setchell & Gardner, 1925 Kukak Bay; Yakutat Bay, Alaska Coilodesme polygnampta Setchell & Gardner Setchell & Gardner, 1925 Amaknak Is., Unalaska, Alaska

Coilodesme rigida Setchell & Gardner Setchell & Gardner, 1925 Redondo to San Diego, Calif.

Coilodesme sitchensis Setchell & Gardner Setchell & Gardner, 1925 Sitka, Alaska

Phaeostrophion irregulare Setchell & Gardner Setchell & Gardner, 1925 Coos Bay, Oregon; Bolinas, Calif.

Fam. Striariaceae

Stictyosiphon tortilis (Ruprecht) Reinke Smith, 1944 Alaska; Monterey Peninsula, Calif.

Fam. Chnoosporaceae

Chnoospora pacifica J. Agardh Dawson, 1944 La Paz, Baja Calif. to St. Augustin, Oaxaca

Chnoospora pannosa J. Agardh Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

Fam. Ishigiaceae

Ishige foliacea Okamura
Dawson, 1944
Northern Gulf of Calif.

Order DICTYOSIPHONALES

Fam. Dictyosiphonaceae

Dictyosiphon foeniculaceus (Hudson) Greville Setchell & Gardner, 1925 Bering Sea to Puget Sound, Wash.

Dictyosiphon hippuroides (Lyngbye) Kützing Setchell & Gardner, 1925 Bering Sea to Unalaska, Alaska Dictyosiphon Hispidus Kjellman Setchell & Gardner, 1925 Orca, Alaska

Dictyosiphon sinicola Gardner Gardner, 1940 Vancouver Is., B. C.; Puget Sound, Wash.

Dictyosiphon tenuis Setchell & Gardner Setchell & Gardner, 1925 Golofin Bay, Alaska

Order LAMINARIALES

Fam. Chordaceae

Chorda Filum (Linnaeus) Lamouroux
Setchell & Gardner, 1925
Bering Sea to Puget Sound, Wash.

Fam. Laminariaceae

Laminaria Andersonii Eaton Smith, 1944 Whidbey Is., Wash, to Carmel, Calif.

Laminaria complanata (Setchell & Gardner) Setchell Setchell & Gardner, 1925 Friday Harbor, Wash.

Laminaria cuneifolia J. Agardh Setchell & Gardner, 1925 Bering Sea to Puget Sound, Wash.

Laminaria cuneifolia f. amplissima Setchell & Gardner Setchell & Gardner, 1925 Sitka, Alaska to Cape Flattery, Wash.

Laminaria cuneifolia f. angusta Setchell & Gardner Setchell & Gardner, 1925
Cape Flattery; Whidbey Is., Wash.

Laminaria cuneifolia f. subsimplex Setchell & Gardner Setchell & Gardner, 1925
Lower Puget Sound, Wash.

Laminaria dentigera Kjellman Setchell & Gardner, 1925 Aleutian Islands, Alaska

- Laminaria ephemera Setchell Smith, 1944 Puget Sound, Wash.; Monterey Peninsula, Calif.
- Laminaria Farlowii Setchell Smith, 1944; Dawson, 1945E Santa Cruz, Calif. to Cabo Colnett, Baja Calif.
- Laminaria Longipes Bory Setchell & Gardner, 1925 Agattu Is.; Kiska Is., Alaska
- Laminaria personata Setchell & Gardner Setchell & Gardner, 1925 Yakutat Bay to Sitka, Alaska
- Laminaria platymeris De la Pylaie Setchell & Gardner, 1925 Bering Sea to Straits of Juan de Fuca
- Laminaria saccharina (Linnaeus) Lamouroux Setchell & Gardner, 1925 Alaska to Coos Bay, Oregon
- Laminaria saccharina f. linearis J. Agardh Setchell & Gardner, 1925 Unga, Alaska to Puget Sound, Wash.
- Laminaria saccharini f. membranacea J. Agardh Setchell & Gardner, 1925 Alaska to Coos Bay, Oregon
- Laminaria Sinclairii (Harvey) Farlow Smith, 1944 Vancouver Is., B. C. to San Luis Obispo Co., Calif.
- PLEUROPHYCUS GARDNERI Setchell & Saunders Setchell & Gardner, 1925 Yakutat Bay, Alaska to Coos Bay, Oregon
- Суаматнеге тriplicata (Postels & Ruprecht) J. Agardh Setchell & Gardnei, 1925 Bering Sea to Puget Sound, Wash.
- Costaria costata (Turner) Saunders Smith, 1944 Shumagin Is., Alaska to San Pedro, Calif.
- THALASSIOPHYLLUM CLATHRUS (Gmelin) Postels & Ruprecht Setchell & Gardner, 1925 Bering Sea to Straits of Juan de Fuca
- Agarum cribrosum Bory Setchell & Gardner, 1925 Bering Sea to San Juan Is., Wash.

AGARUM FIMBRIATUM Harvey
Setchell & Gardner, 1925
Puget Sound, Wash. to central Calif.

Hedophyllum sessile (C. Agardh) Setchell & Gardner, 1925 Yakutat Bay, Alaska to Point Sur, Calif.

Hedophyllum subsessile (Areschoug) Setchell Sanborn & Doty, 1946 Bering Sea; Coos Bay, Oregon

ARTHROTHAMNUS BIFIDUS (Gmelin) J. Agardh Setchell & Gardner, 1925 Aleutian Islands, Alaska

Dictyoneurum californicum Ruprecht Smith, 1944 Vancouver Is., B. C. to San Luis Obispo Co., Calif.

Dictyoneuropsis reticulata (Saunders) G. M. Smith Smith, 1944 Monterey Peninsula, Calif.

Nereocystis Luetkeana (Mertens) Postels & Ruprecht Smith, 1944 Shumagin Is., Alaska to Santa Barbara, Calif.

Postelsia palmaeformis Ruprecht Smith, 1944 Vancouver Is., B. C. to San Luis Obispo Co., Calif.

Macrocystis integrifolia Bory Smith, 1944 Vancouver Is., B. C. to Carmel, Calif.

Macrocystis pyrifera (Linnaeus) C. Agardh Smith, 1944; Taylor, 1945 Sitka, Alaska to Bahía Magdalena, Baja Calif.; cast ashore on Is. Clarion, Revilla Gigedo Arch.

Pelagophycus porra (Leman) Setchell Setchell & Gardner, 1925 Point Conception to San Diego, Calif.

Lessoniopsis Littoralis (Farlow & Setchell) Reinke Smith, 1944 Sitka, Alaska to Carmel, Calif.

Fam. Alariaceae

Pterygophora californica Ruprecht Smith, 1944; Dawson, 1945E Vancouver Is., B. C. to Punta Descanso, Baja Calif.

- Alaria dolichorhachis Kjellman Setchell & Gardner, 1925 Agattu Is., Alaska
- Alaria fistulosa Postels & Ruprecht Setchell & Gardner, 1925 Bering Sea to Wrangell, Alaska
- Alaria fistulosa f. platyphylla Setchell Setchell & Gardner, 1925 Bering Sea to southeastern Alaska
- Alaria fistulosa f. stenophylla Setchell Setchell & Gardner, 1925 Bering Sea to southeastern Alaska
- Alaria lanceolata Kjellman Setchell & Gardner, 1925 Bering Sea to Sitka, Alaska
- Alaria Marginata Postels & Ruprecht Smith, 1944; Sanborn & Doty, 1946 Coos Bay, Ore. to Carmel, Calif.
- Alaria nana Schrader Smith, 1944 Vancouver Is., B. C. to Carmel, Calif.
- Alaria Pylaii (Bory) Greville Setchell & Gardner, 1925 Prince William Sound to Kodiak Is., Alaska
- ALARIA TENUIFOLIA Setchell Setchell & Gardner, 1925 Bering Sea to Puget Sound, Wash.
- Alaria tenuifolia f. typica Setchell Setchell & Gardner, 1925 Unalaska, Alaska
- Alaria tenuifolia f. amplior Setchell & Gardner Setchell & Gardner, 1925
 Esquimault, B. C. to San Juan Is., Wash.
- Alaria valida Kjellman & Setchell Setchell & Gardner, 1925 Unga, Alaska to Puget Sound, Wash.
- ALARIA VALIDA f. LONGIPES Setchell & Gardner Setchell & Gardner, 1925 Whidbey Is., Wash.
- EISENIA ARBOREA Areschoug Setchell & Gardner, 1925 Redondo, Calif. to Cabo San Lazaro, Baja Calif.

3

EISENIA? DESMARESTIOIDES Setchell & Gardner Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

EISENIA? MASONII Setchell & Gardner Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

Egregia Laevigata Setchell Smith, 1944; Dawson, 1945E; 1946 Monterey; Point Conception, Calif. to Cabo Colnett, Baja Calif.; Bahía Los Angeles, Gulf of Calif.

Egregia Menziesii (Turner) Areschoug Smith, 1944 Vancouver Is., B. C. to Point Conception, Calif.

Order FUCALES

Fam. Fucaceae

Fucus edentatus De la Pylaie Setchell & Gardner, 1925 Sitka, Alaska to Coos Bay, Oregon

Fucus Edentatus f. acutus Gardner Setchell & Gardner, 1925 Bellingham, Wash.

Fucus edentatus f. costatus Gardner Setchell & Gardner, 1925 Lower Puget Sound, Wash.

Fucus edentatus f. divaricatus Gardner Setchell & Gardner, 1925 Vancouver Is., B. C.; Bellingham, Wash.

Fucus edentatus f. divergens Gardner Setchell & Gardner, 1925 Kanaka Bay, San Juan Co., Wash.

Fucus edentatus f. Hesperius Gardner Setchell & Gardner, 1925 Cape Arago, Oregon

Fucus evanescens C. Agardh Setchell & Gardner, 1925 Bering Sea to Coos Bay, Oregon

Fucus evanescens f. cornutus Kjellman Setchell & Gardner, 1925 Yakutat Bay, Alaska

- Fucus evanescens f. cuneatus Gardner Setchell & Gardner, 1925 Coos Bay, Oregon
- Fucus evanescens f. dendroides Stroemfelt Setchell & Gardner, 1925 Agattu Is. to Sitka, Alaska
- Fucus evanescens f. ecostatus Gardner Setchell & Gardner, 1925 Coos Bay, Oregon
- Fucus evanescens f. flabellatus Gardner Setchell & Gardner, 1925 Bellingham, Wash.
- Fucus evanescens f. Longifructus Setchell & Gardner Setchell & Gardner, 1925 Orca to Juneau, Alaska
- Fucus evanscens f. Macrocephalus Kjellman Setchell & Gardner, 1925; Connell, 1928 Bering Sea to Departure Bay, B. C.
- Fucus evanscens f. magnificus Gardner Setchell & Gardner, 1925 Juneau, Alaska to Puget Sound, Wash.
- Fucus evanescens f. marginatus Gardner Setchell & Gardner, 1925 Sitka, Alaska
- Fucus evanescens f. nanus Kjellman Setchell & Gardner, 1925 Yakutat Bay, Alaska to Puget Sound, Wash.
- Fucus evanescens f. oregonensis Gardner Setchell & Gardner. 1925 Coos Bay, Oregon
- Fucus evanescens f. pergrandis Kjellman Setchell & Gardner, 1925 Unalaska, Alaska to Puget Sound, Wash.
- Fucus evanescens f. Robustus Setchell & Gardner Setchell & Gardner, 1925 Bering Sea to Friday Harbor, Wash.
- Fucus evanescens f. Rudis Kjellman Setchell & Gardner, 1925 Bering Sea to Skagway, Alaska
- Fucus evanescens f. stellatus Gardner Setchell & Gardner, 1925 Sackman's Point, Kitsap Co., Wash.

Fucus evanescens f. typicus Kjellman Setchell & Gardner, 1925 Harvester and Kodiak Is., Alaska

Fucus furcatus C. Agardh Smith, 1944 Sitka, Alaska to San Luis Obispo Co., Calif.

Fucus furcatus f. abbreviatus Gardner Setchell & Gardner, 1925; Sanborn & Doty, 1946 San Juan Co., Wash. to Coos Bay, Oregon

Fucus furcatus f. angustus Gardner Setchell & Gardner, 1925 San Juan Is., Wash. to central Oregon

Fucus furcatus f. contortus Gardner Setchell & Gardner, 1925 Near Bellingham, Wash.

Fucus furcatus f. cornutus Gardner Setchell & Gardner, 1925 Yakutat Bay, Alaska to Victoria, B. C.

Fucus furcatus f. elongatus Gardner Setchell & Gardner, 1925 San Juan Is., Wash. to Coos Bay, Oregon

Fucus furcatus f. Latifrons Gardner Setchell & Gardner, 1925 Ft. Ward, near Seattle, Wash.

Fucus furcatus f. Linearis Gardner Setchell & Gardner, 1925 Tracyton, Wash.

Fucus furcatus f. Luxurians Gardner
Setchell & Gardner, 1925; Smith, 1944; Sanborn & Doty,
1945
Coos Bay, Oregon to Oil Port, San Luis Obispo Co.,
Calif.

Fucus furcatus f. nigricans Gardner Setchell & Gardner, 1925 Cattle Point, San Juan Is., Wash.

Fucus furcatus f. reflexus Gardner Setchell & Gardner, 1925 Pt. Defiance, Tacoma, Wash.

Fucus furcatus f. rigidus Gardner Setchell and Gardner, 1925; Connell, 1928 Horswell Channel, B. C. to Whidbey Is., Wash.

- Fucus furcatus f. typicus Gardner Setchell & Gardner, 1925 Straits of Juan de Fuca to Fort Ross, Calif.
- Fucus furcatus f. variabilis Gardner Setchell & Gardner, 1925; Connell, 1928 Sitka, Alaska; Campbell River, B. C.
- Fucus Membranaceus Gardner Setchell & Gardner, 1925 Bering Sea to Puget Sound, Wash.
- Fucus membranaceus f. abbreviatus Gardner Setchell & Gardner, 1925 Sitka, Alaska
- Fucus membranaceus f. acuminatus Gardner Setchell & Gardner, 1925 Sitka, Alaska
- Fucus membranaceus f. Latissimus Gardner Setchell & Gardner, 1925 Kodiak Is. to Sitka, Alaska
- Fucus membranaceus f. Limitatus Gardner Setchell & Gardner, 1925 Pt. Defiance, Tacoma, Wash.
- Fucus Membranaceus f. obtusus Gardner Setchell & Gardner, 1925 Sitka, Alaska
- Fucus Membranaceus f. typicus Gardner Setchell & Gardner, 1925 Sitka, Alaska
- Fucus nitens Gardner Setchell & Gardner, 1925 San Francisco Bay, Calif.
- Fucus Parksii Gardner Gardner, 1940 Humbolt Bay; Eureka, Calif.
- Pelvetia fastigiata (J. Agardh) DeToni Smith, 1944; Sanborn & Doty, 1946; Dawson, 1945E; Connell, 1928 Horswell Channel, B. C.; Coos Bay, Oregon to Ensenada, Baja Calif.
- Pelvetia fastigiata f. gracilis Setchell & Gardner Smith, 1944
 Monterey Peninsula; Santa Catalina Is., Calif.

Pelvetiopsis Arborescens Gardner Gardner, 1940 Point Carmel, Calif.

Pelvetiopsis Limitata (Setchell) Gardner Smith, 1944 Vancouver Is., B. C. to Carmel, Calif.

Pelvetiopsis Limitata f. Lata Gardner Smith, 1944
Tomales Point to Monterey, Calif.

Pelvetiopsis limitata f. typica Gardner Setchell & Gardner, 1925 Vancouver Is., B. C. to central Calif.

Hesperophycus Harveyanus (Decaisne) Setchell & Gardner Smith, 1944; Dawson, 1945E Santa Cruz, Calif. to Ensenada, Baja Calif.

Fam. Sargassaceae

Blossevillea Brandegeei Setchell & Gardner Setchell & Gardner, 1930; Dawson, 1945C La Jolla, Calif. to Is. Guadalupe, Baja Calif.

Cystophyllum geminatum (C. Agardh) J. Agardh Setchell & Gardner, 1925 Bering Sea to Puget Sound, Wash.

Halidrys dioica Gardner Setchell & Gardner, 1925; Taylor, 1945; Dawson, 1945E Redondo, Calif. to Is. Cedros, Baja Calif.

Cystoseira Neglecta Setchell & Gardner Setchell & Gardner, 1925; Dawson, 1945C; 1945E Santa Catalina Is.; La Jolla, Calif.; Cabo Colnett, Baja Calif.

Cystoseira osmundacea (Menzies) C. Agardh Smith, 1944; Taylor, 1945; Dawson, 1945E Seaside, Oregon to Punta San Bartolomé, Baja Calif.

Cystoseira Setchellii Gardner Setchell & Gardner, 1925 Redondo to San Diego, Calif.

Sargassum acinacifolium Setchell & Gardner Dawson, 1944 Puerto Libertad to Guaymas, Sonora

SARGASSUM AGARDHIANUM Farlow Setchell & Gardner, 1925; Dawson, 1945E Southern Calif. to Ensenada, Baja Calif. SARGASSUM ASYMMETRICUM Dawson

Dawson, 1944

Punta Peñasco, Sonora to Is. Tiburón, Gulf of Calif.

SARGASSUM BRANDEGEEI Setchell & Gardner

Dawson, 1944; Taylor, 1945

Puerto Libertad to Guaymas, Sonora; Golfo Dulce, Costa Rica?

SARGASSUM CAMOUII Dawson

Dawson, 1944

Is. Tiburón, Gulf of Calif.

SARGASSUM HERPORHIZUM Setchell & Gardner

Dawson, 1944

George Is.; Is. San Pedro Martir, Gulf of Calif.

SARGASSUM HORRIDUM Setchell & Gardner

Dawson, 1944

Vicinity of La Paz, Baja Calif.

Sargassum Howellii Setchell & Gardner

Setchell, 1937; Taylor, 1945

Is. Soccoro; Is. Clarion, Revilla Gigedo Arch.

Sargassum Johnstonii Setchell & Gardner

Dawson, 1944

Punta Peñasco, Sonora to Bahía Agua Verde, Baja Calif.

Sargassum Johnstonii f. gracile Setchell & Gardner

Dawson, 1944

Punta Peñasco to Guaymas, Sonora

SARGASSUM LAPAZEANUM Setchell & Gardner

Dawson, 1944

Guaymas, Sonora to La Paz, Baja Calif.

SARGASSUM LIEBMANNI J. Agardh

Taylor, 1945

Is. María Magdalena, Nayarit to Bahía Honda, Panamá

Sargassum Macdougalii Dawson

Dawson, 1944

Puerto Libertad; Guaymas, Sonora

SARGASSUM PALMERI Grunow

Setchell & Gardner, 1925; 1930

Santa Cruz, Calif. to Is. Guadalupe, Baja Calif.

Sargassum sinicola Setchell & Gardner

Dawson, 1944

Punta Peñasco, Sonora to La Paz, Baja Calif.; Is. Guadalupe, Baja Calif.

RHODOPHYCEAE

(RED ALGAE)

Order BANGIALES

Fam. Goniotrichaceae

Goniotrichum cornu-cervi (Reinsch) Hauck Kylin, 1925 Friday Harbor, Wash.

Goniotrichum elegans (Chauvin) Zanardini Smith, 1944; Dawson, 1944; Goniotrichum Alsidii in Taylor, 1945 Friday Harbor, Wash. to Is. María Madre, Nayarit

GONIOTRICHOPSIS SUBLITTORALIS G. M. Smith Smith, 1944
Monterey, Calif.

Fam. Erythrotrichiaceae

ERYTHROPELTIS DISCIGERA (Berthold) Schmitz Dawson, 1944 Is. Tiburón, Gulf of Calif.

Erythrotrichia californica Kylin Smith, 1944; Dawson, 1944 Monterey, Calif.; Is. Tiburón, Gulf of Calif.

ERYTHROTRICHIA CARNEA (Dillwyn) J. Agardh Smith, 1944; Dawson, 1944; 1945B Monterey; San Diego, Calif.; Gulf of Calif.

ERYTHROTRICHIA CERAMICOLA (Lyngbye) Areschoug Collins, 1913 Ucluelet, Vancouver Is., B. C.

ERYTHROTRICHIA KYLINII Gardner Gardner, 1927 Bering Sea to Puget Sound, Wash.

ERYTHROTRICHIA PARKSII Gardner Gardner, 1927 Eureka, Calif.

ERYTHROTRICHIA PARKSII var. MINOR Gardner Gardner, 1927 Neah Bay, Wash. ERYTHROTRICHIA POLYMORPHA Howe Setchell & Gardner, 1924 Gulf of Calif.

Erythrotrichia porphyroides Gardner Gardner, 1927 San Francisco, Calif.

ERYTHROTRICHIA PULVINATA Gardner Smith, 1944
Monterey, Calif.

ERYTHROTRICHIA TETRASERIATA Gardner Gardner, 1927 San Pedro, Calif.

ERYTHROTRICHIA WELWITSCHII (Ruprecht) Batters Smith, 1944 Monterey, Calif.

Erythrocladia irregularis Rosenvinge Smith, 1944; Dawson, 1944 Friday Harbor, Wash.; Monterey, Calif.; Turner's Is., Gulf of Calif.

ERYTHROCLADIA SUBINTEGRA Rosenvinge Smith, 1944; Dawson, 1945E Friday Harbor, Wash.; Monterey, Calif.; Punta Descanso, Baja Calif.

Fam. Bangiaceae

Bangia fuscopurpurea (Dillwyn) Lyngbye Kylin, 1925; Taylor, 1945 Orcas Is., Wash.; Port Parker, Costa Rica

Bangia Maxima Gardner Gardner, 1927 Bolinas, Calif.

Bangia tenuis Gardner Gardner, 1927 Orcas Is., Wash.

Bangia vermicularis Harvey Smith, 1944; Sanborn & Doty, 1946 Coos Bay, Oregon to Carmel, Calif.

Porphyra abyssicola Kjellman Kylin, 1925 Friday Harbor, Wash.

Porphyra amplissima (Kjellman) Setchell & Hus Kylin, 1925; Setchell & Gardner, 1903 Amaknak Is., Alaska to Friday Harbor, Wash. Porphyra Laciniata (Lightfoot) C. Agardh Setchell & Gardner, 1903 Amaknak Is. to Sitka, Alaska

Porphyra Lanceolata (Setchell & Hus) G. M. Smith Smith, 1944 Chehalis Bay, Wash. to Carmel, Calif.

Porphyra Miniata f. cuneiformis Setchell & Hus Smith, 1944 Gulf of Alaska; Coupeville, Wash.; Monterey, Calif.

Porphyra naiadum Anderson Smith, 1944; Taylor, 1945; Dawson, 1945E Vancouver Is., B. C. to Cabo San Lazaro, Baja Calif. Port Parker, Costa Rica

Porphyra Nereocystis Anderson Smith, 1944 Uyak Bay, Alaska to San Pedro, Calif.

Porphyra occidentalis Setchell & Hus Smith, 1944; Sanborn & Doty, 1946 Coos Bay, Oregon; Carmel Bay, Calif.

Porphyra perforata J. Agardh Smith, 1944; Dawson, 1944; 1945E Shumagin Is., Alaska to Cabo Colnett, Baja Calif.; Bahía Agua Verde, Baja Calif.

Porphyra perforata f. segregata Setchell & Hus Kylin, 1925 Washington to northern Calif.

Porphyra Pulchra Hollenberg Smith, 1944 Santa Cruz to Monterey, Calif.

Porphyra schizophylla Hollenberg Smith, 1944 Pescadero Point, Calif.

Porphyra Thuretii Setchell & Dawson Dawson, 1944; Smith, 1944 Santa Cruz; Monterey, Calif.; Bahía San Felipe, Baja Calif.

Porphyra tenuissima (Stroemfelt) Setchell & Hus Setchell & Gardner, 1903 Shumagin Is.; Yakutat Bay, Alaska

Porphyra umbilicalis (Setchell & Gardner) Collins Collins, 1913; Porphyra laciniata f. umbilicalis in Setchell & Gardner, 1903 Victoria, B. C.? Porphyra variegata Kjellman Smith, 1944 Puget Sound, Wash.; Monterey, Calif.

Porphyrella Californica Hollenberg Hollenberg, 1945 Lady's Harbor, Santa Cruz Is., Calif.; Southern Calif

Porphyrella Gardneri Smith & Hollenberg Smith, 1944; Hollenberg, 1945 Cape Arago, Oregon; Duxbury Reef to Monterey, Calif.

Porphyropsis coccinea (J. Agardh) Rosenvinge Kylin, 1925 Friday Harbor, Wash.

Order NEMALIONALES

Fam. Acrochaetiaceae

Acrochaetium Amphiroae (Drew) Papenfuss
Papenfuss, 1945; Dawson, 1945E; Rhodochorton Amphiroae in Dawson, 1945B
Monterey, Calif. to Cabo Colnett, Baja Calif.

Acrochaetium angustum (Drew) Papenfuss Papenfuss, 1945 Santa Catalina Is., Calif.

Acrochaetium Bornetii Papenfuss Papenfuss, 1945 San Pedro, Calif.

Acrochaetium coccineum (Drew) Papenfuss Papenfuss, 1945 Marin Co.; San Francisco, Calif.

Acrochaetium Daviesii (Dillwyn) Nägeli Papenfuss, 1945; Taylor, 1945 Carmel, Calif. to Is. Clarion, Revilla Gigedo Arch.

Acrochaetium densum (Drew) Papenfuss Papenfuss, 1945 San Francisco, Calif.

Acrochaetium Desmarestiae Kylin Papenfuss, 1945 San Juan Co., Wash.

Acrochaetium Dictyotae Collins Papenfuss, 1945 San Diego Co., Calif. Acrochaetium Eastwoodae (Setchell & Gardner) Papenfuss Papenfuss, 1945 Is. Clarion, Revilla Gigedo Arch.

Acrochaetium elegans (Drew) Papenfuss Papenfuss, 1945 La Jolla, Calif.

Acrochaetium Erythrophyllum Jao Jao, 1937 Port Angeles, Wash.

Acrochaetium Gymnogongri (Drew) Papenfuss Papenfuss, 1945 San Francisco, Calif.

Acrochaetium Hancockii (Dawson) Papenfuss Papenfuss, 1945 Is. Angel de la Guarda, Gulf of Calif.

Acrochaetium Macounii (Collins) Hamel Papenfuss, 1945 Vancouver Is., B. C. to Carmel Bay, Calif.

Acrochaetium magnificum (Drew) Papenfuss Papenfuss, 1945 La Jolla, Calif.

Acrochaetium obscurum (Drew) Papenfuss Papenfuss, 1945 Marin Co. to Carmel, Calif.

Acrochaetium pacificum Kylin Papenfuss, 1945 San Juan Co., Wash.

Acrochaetium penetrale (Drew) Papenfuss Papenfuss, 1945; Taylor, 1945 La Jolla, Calif.; Port Parker, Costa Rica

Acrochaetium plumosum (Drew) G. M. Smith Papenfuss, 1945; Dawson, 1945E Tomales Bay to Carmel, Calif.; Punta Descanso, Baja Calif.

Acrochaetium rhizoideum (Drew) G. M. Smith Papenfuss, 1945 Washington to southern Calif.

Acrochaetium rhizoideum var. patens (Drew) G. M. Smith
Smith, 1944
Carmel, Calif.

- Acrochaetium simplex (Drew) Papenfuss Papenfuss, 1945 Santa Monica, Calif.
- Acrochaetium sinicolum (Dawson) Papenfuss Papenfuss, 1945 Turner's Is., Gulf of Calif.
- Acrochaetium subimmersum (Setchell & Gardner) Papenfuss Papenfuss, 1945 Puget Sound, Wash. to Carmel, Calif.
- Acrochaetium tenuissimum (Collins) Papenfuss Papenfuss, 1945 San Pedro, Calif.
- Acrochaetium Thuretii var. agama (Rosenvinge) Dawson Dawson, 1945D San Pedro, Calif.
- Acrochaetium vagum (Drew) Jao Jao, 1937; Papenfuss, 1945 Cape Flattery; San Juan Is., Wash.; Moss Beach, San Mateo Co., Calif.
- Acrochaetium variabile (Drew) G. M. Smith Papenfuss, 1945 San Juan Is., Wash. to San Pedro, Calif.
- CHROMASTRUM ARCUATUM (Drew) Papenfuss
 Papenfuss, 1945; Rhodochorton arcuatum in Dawson,
 1944
 - Cape Flattery, Wash. to Moss Beach, San Mateo Co., Calif.; Turner's Is., Gulf of Calif.
- Chromastrum hirsutum (Drew) Papenfuss Papenfuss, 1945 Vancouver, B. C.
- CHROMASTRUM IMPLICATUM (Drew) Papenfuss Papenfuss, 1945 Moss Beach, San Mateo Co., Calif.
 - Chromastrum microscopicum (Nägeli) Papenfuss Papenfuss, 1945; Rhodochorton microscopicum in Dawson, 1944 La Jolla, Calif.; Turner's Is., Gulf of Calif.
 - CHROMASTRUM MONILIFORME (Rosenvinge) Papenfuss Papenfuss, 1945 Vancouver Is., B. C.

Chromastrum Porphyrae (Drew) Papenfuss Papenfuss, 1945 San Francisco; Monterey, Calif.

Rhodochorton concrescens Drew Papenfuss, 1945 Carmel Bay, Calif.

Rhodochorton penicilliforme (Kjellman) Rosenvinge Papenfuss, 1945 Spruce Is., Alaska to San Juan Co., Wash.

Rнодосновтом ривригеим (Lightfoot) Rosenvinge Papenfuss, 1945 Bering Sea to San Diego, Calif.

RHODOCHORTON TENUE Kylin
Papenfuss, 1945
San Juan Is., Wash.; Santa Cruz, Calif.

Audouinella membranaceum (Magnus) Papenfuss Papenfuss, 1945 San Juan Co., Wash.

Conchocelis Rosea Batters Jao, 1937 Puget Sound, Wash.

Fam. Helminthocladiaceae

3

Nemalion elminthoides (Velley) Batters Dawson, 1945B; Nemalion lubricum in Smith, 1944 Sitka, Alaska to San Diego, Calif.

Nemalion virens J. Agardh Agardh, 1852 Pacific coast of México, probably Oaxaca

Helminthora Saundersii Gardner Smith, 1944 Monterey, Calif.

HELMINTHORA STRICTA Gardner Gardner, 1926 La Jolla, Calif.

HELMINTHOCLADIA CALIFORNICA (J. Agardh) Kylin Kylin, 1941 Santa Barbara to San Diego, Calif.

Helminthocladia Gracilis Gardner Gardner, 1926 Santa Barbara, Calif. Cumagloia Andersonii (Farlow) Setchell & Gardner Smith, 1944; Dawson, 1945E Vancouver Is., B. C. to San Diego, Calif.; Cabo Colnett, Baja Calif.

Liagora californica Zeh Zeh, 1912; Dawson, 1945D Santa Catalina Is., Calif. to Is. Guadalupe, Baja Calif.

Liagora ceranoides Lamouroux Taylor, 1945 Golfo Dulce, Costa Rica

Liagora valida Harvey Taylor, 1945 Golfo Dulce, Costa Rica

Fam. Chaetangiaceae

GLOIOPHLOEA CONFUSA Setchell
Smith, 1944
Vancouver Is., B. C. to San Diego, Calif.

Scinaia articulata Setchell Setchell, 1914A Santa Barbara, Calif.

Scinaia complanata (Collins) Cotton Taylor, 1945 Is. María Magdalena, Nayarit; Puerto Culebra, C

Is. María Magdalena, Nayarit; Puerto Culebra, Costa Rica

Scinaia Johnstoniae Setchell
Dawson, 1944; Taylor, 1945
Southern Calif. to Puerto Culebra, Costa Rica; Gulf of Calif.

Scinaia Latifrons Howe Dawson, 1944; Taylor, 1945 Southern Calif. to Is. María Magdalena, Nayarit; Gulf of Calif.

Scinaia minima Dawson Dawson, 1945A Is. Cedros, Baja Calif.

PSEUDOSCINAIA SNYDERAE Setchell Setchell, 1914A; Dawson, 1945B San Pedro to San Diego, Calif.

WHIDBEYELLA CARTILAGINEA Setchell & Gardner Kylin, 1925 Whidbey Is., Wash.

- GALAXAURA FASTIGIATA Decaisne Dawson, 1944 Punta Peñasco, Sonora; Is. Tiburón, Gulf of Calif.
- GALAXAURA FILAMENTOSA Chou Taylor, 1945 Is. Clarion, Revilla Gigedo Arch.; Puerto Culebra, Costa Rica
- GALAXAURA MARGINATA (Solander) Kjellman Dawson, 1944 San Jose del Cabo, Baja Calif.
- GALAXAURA OBLONGATA (Ellis & Solander) Lamouroux Taylor, 1945 Is. María Madre, Nayarit
- Galaxaura ramulosa Kjellman Taylor, 1945 Is. Jacarita, Panamá
- Galaxaura squalida Kjellman Taylor, 1945 Bahía Honda, Panamá
- GALAXAURA STUPOCAULON Kjellman Taylor, 1945 Golfo Dulce, Costa Rica
- GALAXAURA SUBFRUTICULOSA Chou Taylor, 1945 Is. Clarion, Revilla Gigedo Arch.
- GALAXAURA VENTRICOSA Kjellman Taylor, 1945 Is. María Magdalena, Nayarit
- GALAXAURA VEPRECULA Kjellman Taylor, 1945 Golfo Dulce, Costa Rica

Fam. Bonnemaisoniaceae

- Bonnemaisonia californica Buffham Smith, 1944 Vancouver Is., B. C. to Ventura, Calif.
- Bonnemaisonia Geniculata Gardner Smith, 1944
 Carmel Bay to Point Sur, Calif.

Bonnemaisonia Hamifera Hariot Feldman, 1942; Asparagopsis hamifera in Kylin, 1925; 1941; Dawson, 1945E Victoria, B. C. to Punta Descanso, Baja Calif.

Asparagopsis Sanfordiana Harvey
Setchell & Gardner, 1930; Dawson, 1944; Taylor, 1945;
see Asparagopsis taxiformis in Feldmann, 1942
Is. Angel de la Guarda, Gulf of Calif. to Is. Clarion,
Revilla Gigedo Arch.

Asparagopsis Sanfordiana f. amplissima Setchell & Gardner ner Setchell & Gardner, 1924; Taylor, 1945 La Paz, Baja Calif.; Revilla Gigedo Arch.

Order GELIDIALES

Fam. Gelidiaceae

Gelidium Arborescens Gardner Smith, 1944
Monterey to Cambria, Calif.

Gelidium caloglossoides Howe Smith, 1944
Monterey to southern Calif.

Gelidium cartilagineum (Linnaeus) Greville Kylin, 1925; Dawson, 1945E San Juan Is., Wash. and southward

Gelidium cartilagineum var. robustum Gardner Smith, 1944; Taylor, 1945 San Francisco, Calif. to Puerto San Bartholomé, Baja Calif.

Gelidium Coulteri Harvey Smith, 1944; Sanborn & Doty, 1946; Dawson, 1945E Coos Bay, Oregon to Punta Descanso, Baja Calif.

Gelidium crinale (Turner) Lamouroux Dawson, 1944; 1945B; Collins, 1913 Victoria, B. C. to La Jolla, Calif.; Bahía Gonzaga, Baja Calif. to Turner's Is., Gulf of Calif.

Gelidium crinale var. Luxurians Collins Gardner, 1927E Southern Calif.

Gelidium decompositum Setchell & Gardner Dawson, 1944 Bahía San Francisquito, Baja Calif.

- Gelidium densum Gardner Gardner, 1927E; Taylor, 1945 San Pedro, Calif.; Is. Cedros, Baja Calif.
- Gelidium Johnstonii Setchell & Gardner Dawson, 1944 Is. Angel de la Guarda, Gulf of Calif. to Guaymas, Sonora
- Gelidium microphysa Setchell & Gardner Setchell & Gardner, 1930; Dawson, 1944 Is. Guadalupe, Baja Calif.; Turner's Is., Gulf of Calif.
- GELIDIUM NUDIFRONS Gardner Gardner, 1927E Southern Calif.
- Gelidium Polystichum Gardner Gardner, 1927E White's Point, San Pedro, Calif.
- GELIDIUM PULCHRUM Gardner
 Kylin, 1941; Sanborn & Doty, 1946; Dawson, 1945E
 Coos Bay, Oregon; Orange County, Calif. to Cabo Colnett, Baja Calif.
- GELIDIUM PURPURASCENS Gardner Smith, 1944 Bolinas to San Diego, Calif.
- Gelidium pusillum (Stackhouse) Le Jolis Smith, 1944; Dawson, 1944; Taylor, 1945 Monterey, Calif. to Panamá
- Gelidium ramuliferum Gardner Gardner, 1927E San Pedro, Calif.
- Gelidium sclerophyllum Taylor Taylor, 1945 Golfo Dulce, Costa Rica
- Gelidium Setchellii Gardner Gardner, 1927E Marin Co., Calif.
- Gelidium sinicola Gardner Smith, 1944 San Francisco Bay; Monterey, Calif.
- Pterocladia mexicana Taylor Taylor, 1945 Cabo San Lazaro, Baja Calif.

Pterocladia musciformis Taylor Taylor, 1945 Golfo Dulce, Costa Rica

Pterocladia Okamurai (Setchell & Gardner) Taylor Taylor, 1945 Is. Clarion, Revilla Gigedo Arch.

Pterocladia pyramidale (Gardner) Dawson Dawson, 1945D; 1945E Southern Calif.; Punta Descanso, Baja Calif.

Gelidiocolax microsphaerica Gardner Gardner, 1927A Balboa, Calif.

Gelidiella acerosa (Forsskål) Feldmann & Hamel Dawson, 1944 Southern Gulf of Calif. to Central America

Gelidiella Hancockii Dawson
Dawson, 1944
Is. Angel de la Guarda, Gulf of Calif.; Kino, Sonora

Gelidiella Mexicana Dawson Dawson, 1944 Bahía Gonzaga, Baja Calif. to Guaymas, Sonora

Gelidiella? refugiensis Dawson Dawson, 1944 Is. Angel de la Guarda, Gulf of Calif.

Wurdemannia miniata (Draparnaud) Feldmann & Hamel Dawson, 1944; Taylor, 1945
Is. Carmen, Gulf of Calif. to Panama City, Panamá

Gelidiopsis tenuis Setchell & Gardner
Dawson, 1944
Guaymas, Sonora to San Jose del Cabo, Baja Calif.; Is.
Clarion, Revilla Gigedo Arch.

Gelidiopsis variabilis (Greville) Schmitz Dawson, 1944 Guaymas, Sonora

Order CRYPTONEMIALES

Fam. Dumontiaceae

Cryptosiphonia Woodii J. Agardh Smith, 1944 Unalaska, Alaska to Venice, Calif.

- THURETELLOPSIS Peggiana Kylin Kylin, 1925 Friday Harbor, Wash.
- Dumontia filiformis (Lyngbye) J. Agardh Setchell & Gardner, 1903 Alaska
- Baylesia plumosa Setchell Smith, 1944 Santa Cruz; Monterey, Calif.
- SARCOPHYLLIS ARCTICA Kjellman Setchell & Gardner, 1903 Alaska
- Pikea Californica Harvey Smith, 1944 Vancouver Is., B. C. to La Jolla, Calif.
- PIKEA PINNATA Setchell Smith, 1944; Dawson, 1945D Bolinas to Coronado, Calif.
- Farlowia compressa J. Agardh Smith, 1944 Tomales Bay to Carmel Bay, Calif.
- Farlowia crassa J. Agardh Smith, 1944 Port Orford, Oregon to San Diego, Calif.
- Farlowia Mollis (Harvey & Bailey) Farlow & Setchell Smith, 1944
 Vancouver, B. C. to Carmel, Calif.
- DILSEA CALIFORNICA (J. Agardh) Schmitz Kylin, 1941; Sanborn & Doty, 1946 Coos Bay, Oregon to San Francisco, Calif.
- LEPTOCLADIA BINGHAMIAE J. Agardh Setchell, 1912; Kylin, 1941; Dawson, 1945E Santa Cruz, Calif. to Cabo Colnett, Baja Calif.
- Leptocladia conferta Setchell Smith, 1944 Crescent City to Carmel Bay, Calif.
- Leptocladia Laxa Taylor Taylor, 1945 Cabo San Lazaro, Baja Calif.
- Weeksia Fryeana Setchell Kylin, 1925 San Juan Co., Wash.

- Weeksia Howellii Setchell & Gardner Setchell & Gardner, 1937 Is. Natividad, Baja Calif.
- Weeksia reticulata Setchell Smith, 1944; Dawson, 1945E Monterey Peninsula, Calif.; Cabo Colnett, Baja Calif.
- Weeksia Templetonii Setchell & Gardner Setchell & Gardner, 1937 Is. Cedros, Baja Calif.
- Constantinea rosa marina (Gmelin) Postels & Ruprecht Setchell & Gardner, 1903; Setchell, 1906 Western Aleutian Is. to Sitka, Alaska
- Constantinea simplex Setchell Smith, 1944 Neah Bay, Wash. to Carmel, Calif.
- Constantinea subulifera Setchell Setchell, 1906; Kylin, 1925 Esquimalt, B. C. to San Juan Is., Wash.

Fam. Gloiosiphoniaceae

- GLOIOFELTIS FURCATA (Postels & Ruprecht) J. Agardh Setchell & Gardner, 1903; Kylin, 1925 Aleutian Islands, Alaska to Puget Sound, Wash.
- GLOIOPELTIS MINIATA Kylin Kylin, 1941 Santa Catalina Is., Calif.
- GLOIOSIPHONIA CALIFORNICA (Farlow) J. Agardh Smith, 1944 Sitka, Alaska to Carmel Bay, Calif.
- GLOIOSIPHONIA CAPILLARIS (Hudson) Carmichael Collins, 1913 Vancouver Is., B. C.
- GLOIOSIPHONIA VERTICILLARIS Farlow Smith, 1944 Sitka, Alaska to Carmel Bay, Calif.

Fam. Endocladiaceae

Endocladia Muricata (Postels & Ruprecht) J. Agardh Smith, 1944 Shumagin Is., Alaska to La Jolla, Calif.

Fam. Squamariaceae

Peyssonnelia calcea Heydrich Taylor, 1945 Is. Socorro, Revilla Gigedo Arch.

Peyssonnelia Clarionensis Taylor Taylor, 1945 Is. Clarion, Revilla Gigedo Arch.

Peyssonnelia pacifica Kylin Smith, 1944; Dawson, 1945A San Juan Is., Wash. to Is. Cedros, Baja Calif.

Peyssonnelia Rubra (Greville) J. Agardh Setchell & Gardner, 1930; Taylor, 1945 Is. Guadalupe, Baja Calif. ?; Is. Clarion; Is. Socorro, Revilla Gigedo Arch.

Rhododermis elegans Crouan Smith, 1944 Marin Co. to Monterey, Calif.

Asymmetria expansa Setchell & Gardner Smith, 1944
Monterey, Calif.

HILDENBRANDIA OCCIDENTALIS Setchell Smith, 1944 Puget Sound, Wash. to Carmel Bay, Calif.

HILDENBRANDIA PROTOTYPUS Nardo Smith, 1944; Taylor, 1945 Alaska to Panamá

HILDENBRANDIA ROSEA Kützing Kylin, 1925; Dawson, 1944 San Juan Co., Wash.; Turner's Is., Gulf of Calif.

Cruoriella Dubyi Crouan
Taylor, 1945
Is. Isabel, Nayarit; Is. Socorro; Is. Clarion, Revilla
Gigedo Arch.

Fam. Cruoriaceae

Petrocelis franciscana Setchell & Gardner Smith, 1944 Puget Sound, Wash. to San Luis Obispo Co., Calif.

•

Petrocelis haematis Hollenberg Hollenberg, 1943 Southern Calif.

Petrocelis Middendorffii (Ruprecht) Kjellman Kylin, 1925 Bering Sea to Whidbey Is., Wash.

Fam. Corallinaceae

CHOREONEMA THURETI (Bornet) Schmitz Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

Melobesia marginata Setchell & Foslie Smith, 1944; Taylor, 1945 Whidbey Is., Wash. to Is. Cedros, Baja Calif.

Melobesia mediocris (Foslie) Setchell & Mason Smith, 1944; Taylor, 1945 Fort Bragg, Calif. to Cabo San Lazaro, Baja Calif.

Archeolithothamnium Howei Lemoine Lemoine, 1929 Is. Coiba, Panamá

LITHOTHAMNIUM ACULEIFERUM Mason Setchell & Mason, 1943 Pacific Grove to La Jolla, Calif.

LITHOTHAMNIUM AUSTRALE f. AMERICANA Foslie Dawson, 1944; Taylor, 1945 Is. Angel de la Guarda, Gulf of Calif. to Bahía Honda, Panamá

LITHOTHAMNIUM AUSTRALE f. MINUTULA Foslie Mesophyllum australe var. minutula in Lemoine, 1929 Is. Coiba, Panamá

LITHOTHAMNIUM AUSTRALE f. TUALENSIS Foslie
Dawson, 1944; Taylor, 1945; Mesophyllum australe var.
tualensis in Lemoine, 1929
Is. Angel de la Guarda, Gulf of Calif. to Bahía Honda,

Panamá

Lithothamnium californicum Foslie Smith, 1944 San Juan Is., Wash. to San Diego, Calif.

LITHOTHAMNIUM CONCHATUM Setchell & Foslie Smith, 1944
San Juan Is., Wash. to Carmel, Calif.

LITHOTHAMNIUM CRASSIUSCULUM (Foslie) Mason Setchell & Mason, 1943 San Pedro to La Jolla, Calif.

LITHOTHAMNIUM GIGANTEUM Mason Setchell & Mason, 1943 La Jolla, Calif.

LITHOTHAMNIUM INDICUM Foslie
Taylor, 1945
Is. Socorro; Is. Clarion, Revilla Gigedo Arch.; Is. Secas,
Panamá

LITHOTHAMNIUM LAMELLATUM Setchell & Foslie Smith, 1944
Monterey, Calif.

LITHOTHAMNIUM MONTEREVICUM Foslie Smith, 1944
Monterey, Calif.

LITHOTHAMNIUM MURICATUM (Foslie) G. DeToni G. DeToni, 1924; Lithophyllum muricatum in Foslie, 1929 Vancouver Is., B. C.

LITHOTHAMNIUM PACIFICUM Foslie Smith, 1944 Whidbey Is., Wash. to Carmel, Calif.

LITHOTHAMNIUM PARCUM Setchell & Foslie Smith, 1944
San Juan Is., Wash. to Carmel, Calif.

LITHOTHAMNIUM PHYMATODEUM Foslie Foslie, 1929 Puget Sound, Wash. to Bolinas, Calif.

LITHOTHAMNIUM RECLINATUM Foslie Foslie, 1929; Collins, 1913 Vancouver Is., B. C. to Tomales Bay, Calif.

LITHOTHAMNIUM VALIDUM Foslie Taylor, 1945 Bahía Petatlán, Guerrero; Puerto Culebra, Costa Rica

CLATHROMORPHUM COMPACTUM f. CIRCUMSCRIPTUM Strömfelt) Foslie Foslie, 1929 Unalaska, Alaska

Hydrolithon Setchellii (Foslie) Setchell & Mason Setchell & Mason, 1943 Redondo to La Jolla, Calif. Fosliella ascripticia (Foslie) G. M. Smith Smith, 1944 Monterey to La Jolla, Calif.

Fosliella dispar (Foslie) G. M. Smith Smith, 1944 Whidbey Is., Wash.; Bolinas; Monterey, Calif.

Fosliella intermedia (Foslie) G. M. Smith Smith, 1944 Pacific Grove to La Jolla, Calif.

Fosliella minuta Taylor Taylor, 1945 Bahía Honda, Panamá

Fosliella Nicholsii (Setchell & Mason) G. M. Smith Smith, 1944 Monterey to San Diego, Calif.

Fosliella Paschalis (Lemoine) Setchell & Gardner Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

LITHOLEPIS ACCOLA Foslie
Setchell & Gardner, 1930
Is. Guadalupe, Baja Calif.; Is. Clarion, Revilla Gigedo Arch.

LITHOLEPIS FERTILIS (Lemoine) Setchell & Mason Setchell & Mason, 1943 Is. Coiba, Panamá

Litholepis sonorensis Dawson Dawson, 1944 Is. Espíritu Santo, Gulf of Calif.

LITHOPORELLA PACIFICA (Heydrich) Foslie Setchell & Gardner, 1930 Is. Clarion, Revilla Gigedo Arch.

Heteroderma corallinicola Dawson Dawson, 1944 Guaymas, Sonora

Heteroderma Gibbsii (Foslie & Setchell) Foslie Dawson, 1944 Is. Angel de la Guarda, Gulf of Calif. to San Jose del Cabo, Baja Calif.

Dermatolithon saxicolum (Lemoine) Setchell & Mason Setchell & Mason, 1943 Is. Cocos, Costa Rica Dermatolithon veleroae Dawson Dawson, 1944 Bahía Agua Verde, Baja Calif.

Porolithon cocosicum Lemoine Lemoine, 1929 Is. Cocos, Costa Rica

Porolithon sonorensis Dawson

Dawson, 1944

Is. Angel de la Guarda, Gulf of Calif. to Guaymas, Sonora

Lithophyllum Bracchiatum (Heydrich) Lemoine Taylor, 1945; Lemoine, 1929 Is. María Magdalena, Nayarit; Is. Socorro; Is. Clarion, Revilla Gigedo Arch.; Is. Secas; Is. Coiba, Panamá

LITHOPHYLLUM (?) COIBENSE Lemoine Lemoine, 1929 Is. Coiba, Panamá

LITHOPHYLLUM DECIPIENS Foslie
Dawson, 1944; Foslie, 1929
Bodega Bay to San Diego, Calif.; Is. Angel de la Guarda,
Gulf of Calif. to Guaymas, Sonora

LITHOPHYLLUM DIGUETI (Hariot) Heydrich Dawson, 1944 Is. Angel de la Guarda; Is. Espíritu Santo, Gulf of Calif.

LITHOPHYLLUM DIVARICATUM Lemoine Taylor, 1945

Is. Socorro, Revilla Gigedo Arch.; Bahía Petatlán, Guerrero; Is. Jicarita, Panamá

LITHOPHYLLUM (?) FETUM Foslie Lemoine, 1929 Is. Cocos, Costa Rica

LITHOPHYLLUM GRUMOSUM Foslie Smith, 1944 Pacific Grove to San Diego, Calif.

LITHOPHYLLUM HANCOCKII Dawson Dawson, 1944 Is. Espíritu Santo, Gulf of Calif.

LITHOPHYLLUM IMITANS Foslie Foslie, 1929 Southern Calif.

LITHOPHYLLUM LITHOPHYLLOIDES Heydrich
Dawson, 1944
Is. Angel de la Guarda to Is. Espíritu Santo, Gulf of
Calif.

- Lithophyllum (?) Lividum Lemoine Lemoine, 1929 Is. Cocos, Costa Rica
- LITHOPHYLLUM MARGARITAE (Hariot) Heydrich Dawson, 1944; Lithophyllum elegans in Setchell & Mason, 1943 La Paz, Baja Calif.
- Lithophyllum neofarlowii Setchell & Mason Smith, 1944 Fort Bragg to Carmel Bay, Calif.
- LITHOPHYLLUM PALLESCENS (Foslie) Heydrich Dawson, 1944 Is. Espíritu Santo, Gulf of Calif.
- Lithophyllum proboscidium Foslie Smith, 1944 Monterey; San Pedro, Calif.
- LITHOPHYLLUM (?) PROPINQUUM var. COCOSICA Lemoine Lemoine, 1929 Is. Cocos, Costa Rica
- LITHOPHYLLUM TRICHOTOMUM (Heydrich) Lemoine
 Dawson, 1944; Taylor, 1945; Neogoniolithon trichotomum in Setchell & Mason, 1943A
 Is. Angel de la Guarda, Gulf of Calif. to Is. Clarion, Revilla Gigedo Arch.
- Lithophyllum veleroae Dawson Dawson, 1944 Is. Espíritu Santo, Gulf of Calif.
- LITHOPHYLLUM WHIDBEYENSE Foslie Setchell & Mason, 1943 Vancouver Is., B. C.; Puget Sound, Wash.
- Corallina chilensis Decaisne Smith, 1944; Taylor, 1945; Dawson, 1945E Vancouver Is., B. C. to Cabo San Lazaro, Baja Calif.
- Corallina cubensis (Montagne) Kützing Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.
- Corallina Gracilis Lamouroux Dawson, 1945B; Taylor, 1945 Southern Calif. to Is. Cedros, Baja Calif.
- Corallina Gracilis var. densa Collins Smith, 1944; Dawson, 1945B; 1945E Marin Co., Calif. to Cabo Colnett, Baja Calif.

Corallina Gracilis var. Lycopodioides Taylor Taylor, 1945 Is. Cedros, Baja Calif.

CORALLINA PILULIFERA Postels & Ruprecht
Dawson, 1944; Corallina officinalis f. pilulifera in Setchell & Gardner, 1903
Alaska; Gulf of Calif.?

Corallina subulata Solander Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif. ?

Corallina vancouveriensis Yendo Yendo, 1902; Taylor, 1945 Port Renfew, Vancouver Is., B. C.; Cabo San Lazaro, Baja Calif.

Pachyarthron cretaceum (Postels & Ruprecht) Manza Manza, 1940 Unalaska, Alaska

LITHOTHRIX ASPERGILLUM J. E. Gray Smith 1944; Taylor, 1945; Dawson, 1945E Vancouver Is., B. C. to Is. Cedros, Baja Calif.

Joculator Pinnatifolius Manza Manza, 1940 Orange and San Diego Counties, Calif.

Bossea angustata Taylor Taylor, 1945 Is. San Benito, Baja Calif.

Bossea Californica (Decaisne) Manza Smith, 1944 Monterey, Calif.

Bossea corymbifera Manza Smith, 1944 Point Lobos, Carmel Bay, Calif.

Bossea dichotoma Manza Smith, 1944 Moss Beach, San Mateo Co.; Monterey Peninsula, Calif.

Bossea frondifera Manza Manza, 1940; Dawson, 1945E Moss Beach, San Mateo Co., Calif.; Punta Descanso, Baja Calif.

Bossea Gardneri Manza Smith, 1944; Taylor, 1945 Duxbury Reef, Marin Co., Calif. to Is. Cedros, Baja Calif. Bossea Interrupta Manza Smith, 1944

Pacific Grove, Calif.

Bossea Orbigniana (Decaisne) Manza

Smith, 1944; Dawson, 1945E

Cape Arago, Oregon; Monterey, Calif. to Cabo Colnett, Baja Calif.

Bossea pachyclada Taylor Taylor, 1945 Is. Cedros, Baja Calif.

Bossea Plumosa Manza

Smith, 1944

Moss Beach, San Mateo Co.; Monterey Peninsula, Calif.

Jania adhaerens Lamouroux Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

Jania capillacea Harvey Taylor, 1939; 1945 Is. Socorro, Revilla Gigedo Arch.; Clipperton Is.

Jania mexicana Taylor Taylor, 1945 Bahía Tangola-Tangola, Oaxaca; Bahía Petatlán, Guerrero

Jania Rubens Lamouroux

Setchell & Gardner, 1930; Dawson, 1944

Is. Guadalupe, Baja Calif.; Pond Is., Gulf of Calif. to Guaymas, Sonora

Amphiroa annulata Lemoine

Taylor, 1945

Is. Socorro, Revilla Gigedo Arch.; Golfo Dulce, Costa Rica

Amphiroa compressa var. tenuis Taylor Taylor, 1945 Is. María Magdalena, Nayarit

Amphiroa Crosslandii Lemoine Taylor, 1945; Lemoine, 1929

Is. Socorro, Revilla Gigedo Arch.; Tangola-Tangola, Oaxaca; Is. Gorgona, Gulf of Panamá

Amphiroa dimorpha Lemoine Taylor, 1945 Is. Isabel, Nayarit Amphiroa foliacea Lamouroux Taylor, 1945 Is. María Magdalena, Nayarit

Amphiroa fragilissima (Linnaeus) Lamouroux Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

Amphiroa franciscana Taylor Taylor, 1945 Is. María Magdalena, Nayarit

Amphiroa Mexicana Taylor Taylor, 1945 Morro de Petatlán, Guerrero

Amphiroa minutissima Taylor Taylor, 1945 Golfo Dulce, Costa Rica

Amphiroa peninsularis Taylor Taylor, 1945 San Diego, Calif.; Is. Cedros, Baja Calif.; Is. María Magdalena, Nayarit; Bahía Petatlán, Guerrero

Aмрніком роцумоврна Lemoine Taylor, 1945 Golfo Dulce, Costa Rica

Amphiroa pusilla Yendo Dawson, 1944

Is. Angel de la Guarda, Gulf of Calif. to Guaymas, Sonora

Amphiroa rigida Lamouroux Dawson, 1944 Bahía Tepoca to Guaymas, Sonora

Amphiroa zonata Yendo

Dawson, 1944

Is. Angel de la Guarda, Gulf of Calif. to Guaymas, Sonora

Calliarthron cheilosporioides Manza Smith, 1944 Bolinas to San Pedro, Calif.

Calliarthron pinnulatum Manza Manza, 1940 Puget Sound, Wash.; ?; Moss Beach, San Mateo Co., Calif.

Calliarthron regenerans Manza Manza, 1940 Moss Beach, San Mateo Co., Calif. Calliarthron Setchelliae Manza Smith, 1944 Moss Beach, San Mateo Co.; Monterey, Calif.

Calliarthron Schmittii Manza Manza, 1940 San Diego, Calif.

Fam. Dermocorynidaceae

Dermocorynus occidentalis Hollenberg Hollenberg, 1940 Los Angeles Co., Calif. to Punta Banda, Baja Calif.

Fam. Grateloupiaceae

Grateloupia abreviata Kylin Kylin, 1941 La Jolla, Calif.

Grateloupia acroidalea Setchell & Gardner Dawson, 1944 Guaymas, Sonora

Grateloupia californica Kylin Smith, 1944; Dawson, 1945E Puget Sound, Wash. to Cabo Colnett, Baja Calif.

Grateloupia cerrosiana Taylor Taylor, 1945 Is. Cedros, Baja Calif.

Grateloupia filicina (Wulfen) C. Agardh Taylor, 1945; Dawson, 1945E Punta Descanso; Cabo Colnett, Baja Calif.; Bahía Petatlán, Guerrero

Grateloupia (?) Hancockii Dawson Dawson, 1944 Kino, Sonora

Grateloupia Howeii Setchell & Gardner Dawson, 1944
Is. San Esteban, Gulf of Calif.

Grateloupia Johnstonii Setchell & Gardner Dawson, 1944 Is. Angel de la Guarda, Gulf of Calif.

- Grateloupia Maxima (Gardner) Kylin Kylin, 1941 San Francisco; La Jolla, Calif.
- Grateloupia pinnata (Postels & Ruprecht) Setchell Kylin, 1925 Sitka, Alaska to Tracyton, Wash.
- Grateloupia prolongata J. Agardh Dawson, 1944; 1945C; 1945E La Jolla, Calif. to central Mexico
- Grateloupia Setchellii Kylin Smith, 1944 Monterey, Calif.
- Grateloupia squarrulosa Setchell & Gardner Dawson, 1944
 Smith Is., Gulf of Calif.
- Cryptonemia Borealis Kylin Kylin, 1925 San Juan Co., Wash.
- Cryptonemia decolorata Taylor Taylor, 1945 Is. María Magdalena, Nayarit
- CRYPTONEMIA OBOVATA J. Agardh Kylin, 1941; Dawson, 1945B San Francisco; La Jolla, Calif.
- CRYPTONEMIA OVALIFOLIA Kylin Smith, 1944; Sanborn & Doty, 1946 Coos Bay, Oregon; Pacific Grove, Calif.
- Aeodes Gardneri Kylin Smith, 1944 Puget Sound, Wash. to San Pedro, Calif.
- Estebania conjuncta Setchell & Gardner
 Dawson, 1944
 Is. Angel de la Guarda, Gulf of Calif. to Guaymas, Sonora
- Polyopes Bushiae Farlow Kylin, 1941; Taylor, 1945 San Pedro, Calif. to Is. Cedros, Baja Calif.
- Polyopes clarionensis Setchell & Gardner Setchell & Gardner, 1937A
 Is. Clarion, Revilla Gigedo Arch.

- Polyopes sinicola Setchell & Gardner Dawson, 1944
 Northern Gulf of Calif.
- HALYMENIA (?) ABYSSICOLA Dawson Dawson, 1944 Is. Partida, Gulf of Calif.
- Halymenia actinophysa Howe Dawson, 1944; Taylor, 1945 Punta Peñasco, Sonora; Is. Tiburón, Gulf of Calif.; Is. Clarion; Is. Socorro, Revilla Gigedo Arch.
- HALYMENIA AGARDHII DeToni Taylor, 1945 Is.María Magdalena, Nayarit
- HALYMENIA CALIFORNICA Smith & Hollenberg Smith, 1944 Monterey Peninsula, Calif.
- Halymenia (?) refugiensis Dawson Dawson, 1944 Is. Angel de la Guarda, Gulf of Calif.
- Zanardinula abbreviata (Setchell & Gardner) J. DeToni J. DeToni, 1936; *Prionitis abbreviata* in Dawson, 1944 Is. San Esteban, Gulf of Calif. to Guaymas, Sonora
- Zanardinula Andersoniana (Eaton) Papenfuss Papenfuss, 1943; Dawson, 1945B; 1945E; Prionitis Andersoniana in Smith, 1944; Sanborn & Doty, 1946 Coos Bay, Oregon to Cabo Colnett, Baja Calif.
- Zanardinula australis (J. Agardh) Papenfuss Papenfuss, 1943; Prionitis australis in Smith. 1944 Monterey, Calif.
- Zanardinula filiformis (Kylin) Papenfuss Papenfuss, 1943; *Prionitis filiformis* in Smith, 1944; Taylor, 1945 Cape Arago, Oregon to Is. Cedros, Baja Calif.
- Zanardinula filiformis var. delicatula (Taylor) Dawson Dawson, 1945D; Prionitis filiformis var. delicatula in Taylor, 1945 Is. Cedros, Baja Calif.
- Zanardinula guaymasensis (Dawson) Dawson Dawson, 1945D; *Prionitis guaymasensis* in Dawson, 1944 Is. Angel de la Guarda, Gulf of Calif. to Guaymas, Sonora

- Zanardinula kinoensis (Dawson) Dawson Dawson, 1945D; *Prionitis kinoensis* in Dawson, 1944 Kino, Sonora
- Zanardinula lanceolata (Harvey) J. DeToni J. DeToni, 1936; *Prionitis lanceolata* in Smith, 1944 Vancouver Is., B. C. to San Pedro, Calif.
- Zanardinula Linearis (Kylin) Papenfuss Papenfuss, 1943; Dawson, 1945E; *Prionitis linearis* in Smith, 1944 San Mateo Co., Calif. to Punta Descanso, Baja Calif.
- Zanardinula Lyallii (Harvey) J. DeToni J. DeToni, 1936; *Prionitis Lyallii* in Smith, 1944; Taylor, 1945 Vancouver Is., B. C. to Carmel Bay, Calif.; Bahía Magdalena, Baja Calif. ?
- Zanardinula Mexicana (Dawson) Dawson Dawson, 1945D; *Prionitis mexicana* in Dawson, 1944 Bahía Santa María; San Jose del Cabo; Baja Calif.
- Zanardinula Sternbergii (C. Agardh) J. DeToni J. DeToni, 1936; *Prionitis Sternbergii* in Dawson. 1944 Georges Is., Gulf of Calif. to central Mexico
- Lobocolax deformans Howe Smith, 1944; Taylor, 1945; Dawson, 1945E Monterey, Calif.; Punta Descanso; Is. Cedros, Baja Calif.

Fam. Kallymeniaceae

- KALLYMENIA ANGUSTATA Setchell & Gardner Dawson, 1944; 1945C; Setchell & Gardner, 1937 Mission Beach, Calif.; Bahía Santa María, Baja Calif.; Bahía Tepoca, Sonora
- Kallymenia Guaymasensis Dawson Dawson, 1944 Guaymas, Sonora
- Kallymenia oblongifructa Setchell Kylin, 1925; Setchell, 1912 Sitka; Seldovia, Alaska to Puget Sound, Wash.
- KALLYMENIA ORNATA (Postels & Ruprecht) J. Agardh Setchell & Gardner, 1903; Collins, 1913 Yakutat Bay, Alaska to Vancouver Is., B. C.

- Kallymenia pertusa Setchell & Gardner Dawson, 1944 Is. San Pedro Martir, Gulf of Calif.
- Kallymenia reniformis (Turner) J. Agardh Setchell & Gardner, 1903; Collins, 1913 Esquimault, B. C.
- Kallymenia reniformis f. cuneata J. Agardh Setchell & Gardner, 1903 Unalaska; Morzhovoi Bay, Alaska
- Kallymenia tenuifolia Taylor Taylor, 1945 Is. Socorro, Revilla Gigedo Arch.
- Kallymenia veleroae Dawson Dawson, 1944 Guaymas, Sonora
- Meredithia Californica J. Agardh Kylin, 1941; J. Agardh, 1899 California (locality unknown)
- Pugetia firma Kylin Smith, 1944 Monterey Peninsula, Calif.
- Pugetia fragilissima Kylin Kylin, 1925; Sanborn & Doty, 1946 Friday Harbor, Wash.; Coos Bay, Oregon
- Callophyllis acrocarpa Setchell Setchell, 1923A Santa Cruz to Santa Barbara, Calif.
- Callophyllis crassifolia Setchell & Swezy Smith, 1944
 San Mateo Co. to Carmel, Calif.
- Callophyllis crenulata Setchell Smith, 1944 Whidbey Is., Wash.; Pacific Grove, Calif.
- CALLOPHYLLIS DISSECTA Setchell & Swezy Kylin, 1941
 La Jolla, Calif.
- Callophyllis edentata Kylin Kylin, 1925 Friday Harbor, Wash.

- Callophyllis filicina Setchell & Swezy Setchell, 1923A
 Venice to La Jolla, Calif.
- Callophyllis flabellulata Harvey Kylin, 1925; Sanborn & Doty, 1946 Esquimault, B. C. to Coos Bay, Oregon
- Callophyllis Gardneri Setchell Setchell, 1923A Venice to Redondo, Calif.
- Callophyllis Heanophylla Setchell Kylin, 1925; Sanborn & Doty, 1946 Friday Harbor, Wash. to Coos Bay, Oregon
- Callophyllis Johnstonii Setchell & Gardner Dawson, 1944
 Is. Tortuga, Gulf of Calif.
- Callophyllis Marginifructa Setchell & Swezy Smith, 1944; Sanborn & Doty, 1946 Coos Bay, Oregon to San Diego, Calif.
- Callophyllis Megalocarpa Setchell & Swezy Smith, 1944; Dawson, 1945E Whidbey Is., Wash. to Santa Barbara, Calif.; Punta Descanso, Baja Calif.
- Callophyllis obtusifolia J. Agardh Smith, 1944 Santa Cruz to San Pedro, Calif.
- Callophyllis odonthalioides Setchell Setchell, 1923A Santa Cruz to San Diego, Calif.
- Callophyllis pinnata Setchell & Swezy Smith, 1944; Dawson, 1945E Marin Co. to Carmel, Calif.; Punta Descanso; Cabo Colnett, Baja Calif.
- Callophyllis plumosa Setchell & Swezy Setchell, 1923A
 San Pedro to La Jolla, Calif.
- Callophyllis stenophylla Setchell Setchell, 1923A Bolinas, Calif.
- Callophyllis Thompsonii Setchell Setchell, 1923A San Juan Co., Wash.

Callophyllis violacea J. Agardh Kylin, 1941; Taylor, 1945; Dawson, 1945E Santa Barbara, Calif. to Cabo San Lazaro, Baja Calif.

Callocolax fungiformis Kylin Kylin, 1925 Friday Harbor, Wash.

Callocolax globulosis Dawson Dawson, 1945D San Diego, Calif.

Callocolax Neglectus Schmitz Smith, 1944 Monterey, Calif.

Fam. Choreocolaceae

CHOREOCOLAX POLYSIPHONIAE Reinsch Smith, 1944; Dawson, 1945E Sitka, Alaska; Monterey, Calif.; Cabo Colnett. Baja Calif.

Order GIGARTINALES

Fam. Nemastomaceae

Predaea Masonii (Setchell & Gardner) J. DeToni J. DeToni, 1936; Clarionea Masonii in Setchell & Gardner, 1930 Is. Clarion, Revilla Gigedo Arch.

Schizymenia epiphytica (Setchell & Lawson) Smith & Hollenberg
Smith, 1944; Papenfuss, 1944A
Monterey Peninsula, Calif.

Schizymenia Johnstonii Setchell & Gardner Dawson, 1944
Is. San Esteban, Gulf of Calif.

Schizymenia pacifica Kylin Smith, 1944; Dawson, 1945E Unga Is., Alaska to Punta Descanso, Baja Calif.

Fam. Solieriaceae

Turnerella Mertensiana (Postels & Ruprecht) Schmitz Setchell & Gardner, 1903; Collins, 1913 Shumagin Is., Alaska to Victoria, B. C.?

Eucheuma uncinatum Setchell & Gardner Dawson, 1944 Is. Angel de la Guarda, Gulf of Calif. to Mazatlán, Sinaloa

AGARDHIELLA COULTERI (Harvey & Bailey) Setchell Smith, 1944; Dawson, 1945E Vancouver Is., B. C. to Cabo Colnett, Baja Calif.

Agardhiella Mexicana Dawson Dawson, 1944; 1945E Bahía Gonzaga, Baja Calif.; Is. Angel de la Guarda, Gulf of Calif.; Cabo Colnett, Baja Calif.

Agardhiella tenera (J. Agardh) Schmitz Dawson, 1944; Taylor, 1945 San Jose del Cabo, Baja Calif.; Is. Clarion, Revilla Gigedo Arch.

Gardneriella tubifera Kylin Smith, 1944; Dawson, 1945E Monterey Peninsula, Calif.; Punta Descanso; Cabo Colnett, Baja Calif.

Opuntiella californica (Farlow) Kylin Smith, 1944 Unga Is., Alaska to San Diego, Calif.

Sarcodiotheca cuneata Setchell & Gardner Setchell & Gardner, 1937A
Is. San Martin, Baja Calif.

Sarcodiotheca dichotoma (Howe) Dawson Dawson, 1944 Guaymas, Sonora to La Paz, Baja Calif.

Sarcodiotheca ecuadoreana Taylor Taylor, 1945 Is. María Magdalena, Nayarit; Puerto Culebra, Costa Rica

Sarcodiotheca elongata (Setchell & Gardner) Setchell Dawson, 1944 Is. Tiburón; Is. San Pedro Martir, Gulf of Calif.

Sarcodiotheca furcata (Setchell & Gardner) Kylin Kylin, 1932
Friday Harbor, Wash.

Sarcodiotheca linearis Setchell & Gardner Dawson, 1944 Cape district, Baja Calif.

Sarcodiotheca Meridionalis Setchell & Gardner Setchell & Gardner, 1937A Is. San Martin, Baja Calif.

Fam. Hypneaceae

Hypnea adunca J. Agardh Kylin, 1941 Santa Barbara; San Diego, Calif.

Hypnea californica Kylin Kylin, 1941; Taylor, 1945 La Jolla, Calif.; Bahía Petatlán, Guerrero

Hypnea Esperi Bory
Dawson, 1944; 1946
La Jolla, Calif.; Ensenada, Baja Calif.; Is. Tiburón,
Gulf of Calif. to Bahía Agua Verde, Baja Calif.

Hypnea Evermanii Setchell & Gardner Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

Hypnea Johnstonii Setchell & Gardner Dawson, 1944; Taylor, 1945 Cabo San Lazaro; Bahía Santa María, Baja Calif.; Pond Is., Gulf of Calif. to Guaymas, Sonora

Hypnea nidifica J. Agardh Dawson, 1944 Punta Peñasco, Sonora to Costa Rica

Hypnea nidulans Setchell
Dawson, 1944
Pond Is., Gulf of Calif. to Bahía Agua Verde, Baja
Calif.

Hypnea pannosa J. Agardh Dawson, 1944; Taylor, 1945 Is. Tiburón, Gulf of Calif. to Is. Secas, Panamá

Hypnea spinella (C. Agardh) Kützing Taylor, 1945 Bahía Petatlán, Guerrero

Hypnea variabilis Okamura
Dawson, 1946
La Jolla, Calif.; Ensenada, Baja Calif.

Fam. Rhodophyllidaceae

Euthora cristata (Linnaeus) J. Agardh Setchell & Gardner, 1903 Shumagin Is. to Cook Inlet, Alaska

Euthora fruticulosa (Ruprecht) J. Agardh Kylin, 1925 Vancouver Is., B. C. to Friday Harbor, Wash.

Rнорорнуцція ріснотома f. setacea Kjellman Setchell & Gardner, 1903 Unalaska, Alaska

Fam. Plocamiaceae

Plocamium Pacificum Kylin Smith, 1944; Taylor, 1945; Dawson, 1945E Vancouver Is., B. C. to Is. Clarion, Revilla Gigedo Arch.

Plocamium tenue Kylin Kylin, 1925 Friday Harbor, Wash.

Plocamium violaceum Farlow Smith, 1944 Vancouver Is., B. C. to San Diego, Calif.

PLOCAMIOCOLAX PULVINATA Setchell Smith, 1944; Dawson, 1945C San Juan Is., Wash. to La Jolla, Calif.

Fam. Gracilariaceae

CORALLOPSIS SALICORNIA (C. Agardh) Greville Kylin, 1932 Unalaska, Alaska (a very doubtful record)

Gracilaria Andersonii (Grunow) Kylin Kylin, 1941; Dawson, 1945E La Jolla, Calif. to Cabo Colnett, Baja Calif.

Gracilaria cerrosiana Taylor Taylor, 1945 Is. Cedros, Baja Calif.

Gracilaria compressa (C. Agardh) Greville Dawson, 1944 Vicinity of Guaymas, Sonora Gracilaria confervoides (Linnaeus) Greville Dawson, 1944; 1945B; Taylor, 1945 San Diego, Calif.; Gulf of Calif.; Is. Clarion, Revilla Gigedo Arch.

Gracilaria crispata Setchell & Gardner
Dawson, 1944
Is. Tiburón, Gulf of Calif.; Is. Clarion, Revilla Gigedo
Arch.; Bahía Banderas

Gracilaria guaymasensis Dawson Dawson, 1944 Guaymas, Sonora

Gracilaria Hancockii Dawson Dawson, 1944 Is. Angel de la Guarda; Is. Tiburón, Gulf of Calif.

Gracilaria Johnstonii Setchell & Gardner
Dawson, 1944; Taylor, 1945
Punta Turloe, Baja Calif. to Is. Isabel, Nayarit; Gulf of
Calif.

Gracilaria lacerata Setchell & Gardner Dawson, 1944 Santa Rosalia, Baja Calif.; Guaymas, Sonora

Gracilaria lichenoides (Linnaeus) Harvey Dawson, 1944 Bahía Concepción, Baja Calif. (doubtful)

Gracilaria linearis Kylin Smith, 1944; Dawson, 1945B; 1945E Monterey Peninsula; San Pedro, Calif.; Punta Descanso, Baja Calif.

Gracilaria pachydermatica Setchell & Gardner Dawson, 1944
Is. Tortuga, Gulf of Calif.

Gracilaria panamensis Taylor Taylor, 1945 Puerto Culebra, Costa Rica; Is. Taboga, Panamá

Gracilaria pinnata Setchell & Gardner Dawson, 1944; Taylor, 1939; 1945 Bahía Magdalena, Baja Calif.; Is. Angel de la Guarda, Gulf of Calif. to Is. María Magdalena, Nayarit

Gracilaria robusta Setchell Smith, 1944 Monterey Peninsula, Calif. GRACILARIA SJOESTEDTII Kylin

Smith, 1944; Dawson, 1944; 1945E

Vancouver Is., B. C. to Cabo Colnett, Baja Calif.; Bahía Tepoca, Sonora

Gracilaria subsecundata Setchell & Gardner Dawson, 1944

Guaymas, Sonora

GRACILARIA TENUIFOLIA Taylor

Taylor, 1945

Is. Socorro; Is. Clarion, Revilla Gigedo Arch.

GRACILARIA VELEROAE Dawson

Dawson, 1944; 1946

Bahía San Felipe, Baja Calif. to Guaymas, Sonora; La Jolla; Coronado, Calif.; Is. Socorro; Is. Clarion, Revilla Gigedo Arch.

GRACILARIA VIVESII Howe

Dawson, 1944

Guaymas, Sonora to La Paz, Baja Calif.

GRACILARIOPHILA GARDNERI Setchell

Setchell, 1923; Dawson, 1945C

Santa Monica to La Jolla, Calif.

GRACILARIOPHILA ORYZOIDES Setchell & Wilson

Smith, 1944; Dawson, 1945E

Coos Bay, Oregon to Cabo Colnett, Baja Calif.

Tylotus Cunninghamii (J. Agardh) Kylin

Kylin, 1941; Dawson, 1945C

Santa Barbara to La Jolla, Calif.

Fam. Dicranemaceae

DICRANEMA ROSALIAE Setchell & Gardner

Dawson, 1944

Is. Angel de la Guarda to Is. Espíritu Santo, Gulf of Calif.

Fam. Phyllophoraceae

PHYLLOPHORA CALIFORNICA (J. Agardh) Kylin

Kylin, 1932

San Francisco, Calif.

PHYLLOPHORA CLEVELANDII Farlow

Smith, 1944

Bolinas, Calif. to near Rosarita Beach, Baja Calif.

Petroglossum Pacificum Hollenberg Hollenberg, 1943; 1945 Coos Bay, Oregon to La Jolla, Calif.

Petroglossum parvum Hollenberg Hollenberg, 1945 Laguna Beach; La Jolla, Calif.

Ahnfeltia gigartinoides J. Agardh Smith, 1944; Taylor, 1945 Vancouver Is. B. C. to San Agustin, Oaxaca

Ahnfeltia plicata (Hudson) Fries Smith, 1944 Bering Sea to Carmel, Calif.

Gymnogongrus carnosus Setchell & Gardner Dawson, 1944
Is. San Pedro Martir, Gulf of Calif.

Gymnogongrus divaricatus Holmes Dawson, 1944 Turner's Is., Gulf of Calif.

Gymnogongrus Hancockii Dawson Dawson, 1944 Kino, Sonora

Gymnogongrus Leptophyllus J. Agardh Smith, 1944; Dawson, 1945E San Francisco to San Diego, Calif.; Cabo Colnett, Baja Calif.

Gymnogongrus linearis (Turner) J. Agardh Smith, 1944 Coos Bay, Oregon to San Luis Obispo Co., Calif.

Gymnogongrus martinensis Setchell & Gardner Setchell & Gardner, 1937A; Taylor, 1945 Is. San Martin, Bahía San Bartolomé, Baja Calif.; Is. Socorro, Revilla Gigedo Arch.

Gymnogongrus norvegicus (Turner) J. Agardh Collins, 1913 Ucluelet, Vancouver, B. C.

Gymnogongrus platyphyllus Gardner Smith, 1944 Bolinas, Calif. to Ensenada, Baja Calif.

Gymnogongrus sinicola Dawson
Dawson, 1944
Is. Angel de la Guarda, Gulf of Calif. to Guaymas, Sonora

Stenogramme californica Harvey Smith, 1944 San Juan Is., Wash. to San Diego, Calif.

Stenogramme interrupta (C. Agardh) Montagne Taylor, 1945 Is. Clarion; Is. Socorro, Revilla Gigedo Arch.

Fam. Gigartinaceae

Chondrus crispus (Linnaeus) Lyngbye Setchell & Gardner, 1903 Bering Sea to Unalaska, Alaska

GIGARTINA AGARDHII Setchell & Gardner Smith, 1944; Sanborn & Doty, 1946 Coos Bay, Oregon to La Jolla, Calif.

GIGARTINA ARMATA J. Agardh Setchell & Gardner, 1933; Taylor, 1945 San Diego, Calif. to Is. Cedros, Baja Calif.

GIGARTINA ASPERIFOLIA J. Agardh Setchell & Gardner, 1933 Santa Barbara to La Jolla, Calif.

GIGARTINA BINGHAMIAE J. Agardh Setchell & Gardner, 1933; Sanborn & Doty, 1946 Coos Bay, Oregon; Southern Calif.; Puget Sound?

GIGARTINA BORYI Setchell & Gardner Smith, 1944
Pacific Grove to San Diego, Calif.

GIGARTINA CALIFORNICA J. Agardh Smith, 1944; Sanborn & Doty, 1946; Dawson. 1945E Coos Bay, Oregon to Carmel, Calif.; Punta Descanso; Cabo Colnett, Baja Calif.

GITARTINA CANALICULATA Harvey Smith, 1944; Dawson, 1945E Coos Bay, Oregon to Cabo Colnett, Baja Calif.

GIGARTINA CORYMBIFERA (Kützing) J. Agardh Smith, 1944 Fort Ross to San Diego, Calif.

GIGARTINA CRISTATA (Setchell) Setchell & Gardner Smith, 1944; Dawson, 1945E
Westport, Wash. to Point Sur, Calif.; Punta Descauso.
Baja Calif.

GIGARTINA DICHOTOMA Gardner Setchell & Gardner, 1933 Duxbury Reef, Marin Co. to Point Sur, Calif.

GIGARTINA EATONIANA J. Agardh Setchell & Gardner, 1933; Dawson, 1944 Santa Barbara to La Jolla, Calif.; Puerto Libertad, Sonora to Is. Tiburón, Gulf of Calif.

GIGARTINA ECHINATA Gardner Setchell & Gardner, 1933 Santa Cruz (?); Santa Catalina Is.; La Jolla, Calif.

GIGARTINA EXASPERATA Harvey & Bailey Setchell & Gardner, 1933 Vancouver Is., B. C. to northen Calif.

GIGARTINA HARVEYANA (Kützing) Setchell & Gardner Smith, 1944; Dawson, 1945E Santa Cruz, Calif. to Punta Descanso, Baja Calif.

GIGARTINA JARDINII J. Agardh Setchell & Gardner, 1933 Monterey; Santa Barbara, Calif.

GIGARTINA JOHNSTONII Dawson
Dawson, 1944
Bahía Gonzaga, Baja Calif. to Turner's Is., Gulf of
Calif.

GIGARTINA LATISSIMA (Harvey) Eaton Setchell & Gardner, 1933 Near Esquimault, B. C.

GIGARTINA LEPTORHYNCHOS J. Agardh Smith, 1944; Taylor, 1945; Dawson, 1945E Santa Cruz, Calif. to Is. Cedros, Baja Calif.

GIGARTINA MACDOUGALII Dawson Dawson, 1944 Puerto Libertad, Sonora

GIGARTINA MAMILLOSA (Goodenough & Woodward) J.
Agardh
Setchell & Gardner, 1933
Westport, Wash.; Seal Rocks, Oregon

GIGARTINA MULTIDICHOTOMA Dawson
Dawson, 1946
La Jolla, Calif.; Punta Descanso, Baja Calif.

GIGARTINA OBOVATA J. Agardh Setchell & Gardner, 1933 San Francisco, Calif. GIGARTINA PAPILLATA (C. Agardh) J. Agardh Smith, 1944; Dawson, 1945E Tomales Bay to Carmel, Calif.; Punta Descanso, Baja Calif.

GIGARTINA PECTINATA Dawson
Dawson, 1944; 1946
Punta Peñasco, Sonora; Bahía Los Angeles; Is. Angel
de la Guarda, Gulf of Calif.

GIGARTINA SERRATA Gardner Setchell & Gardner, 1933; Taylor, 1945 Balboa, Calif. to Is. Cedros, Baja Calif.

GIGARTINA SITCHENSIS Ruprecht Setchell & Gardner, 1933 Sitka, Alaska to Whidbey Is., Wash.

GIGARTINA SPINOSA (Kützing) Harvey Smith, 1944; Dawson, 1945E Monterey, Calif. to Punta Descanso, Baja Calif.

GIGARTINA STELLATA (Stackhouse) Batters Setchell & Gardner, 1933 West Coast of Vancouver Is., B. C.

GIGARTINA TEPIDA Hollenberg Hollenberg, 1945; Dawson, 1944 as G. Teedii Balboa Harbor, Calif.; Guaymas, Sonora

GIGARTINA TURNERI Setchell & Gardner Setchell & Gardner, 1933; Dawson, 1945B Southern Calif. ?

GIGARTINA UNALASCHCENSIS (Ruprecht) Ruprecht Setchell & Gardner, 1933 Bering Sea to Whidbey Is., Wash.

Rhodoglossum Affine (Harvey) Kylin Smith, 1944; Sanborn & Doty, 1946; Dawson, 1945Е Coos Bay, Oregon to Punta Descanso, Baja Calif.

Rhodoglossum americanum Kylin Smith, 1944; Dawson, 1945B; 1946 Bolinas to Carmel; Coronado, Calif.; Cabo Colnett, Baja Calif.

Rhodoglossum coriaceum Dawson Dawson, 1946 Punta Banda; Punta Descanso, Baja Calif.

Rhodoglossum Hancockii Dawson Dawson, 1944 Is. San Esteban, Gulf of Calif.

- Rhodoglossum latissimum J. Agardh Kylin, 1925 Whidbey Is., Wash.
- RHODOGLOSSUM PARVUM Smith & Hollenberg Smith, 1944
 Monterey, Calif.
- RHODOGLOSSUM ROSEUM (Kylin) G. M. Smith Smith, 1944; Dawson, 1946 Monterey Peninsula, Calif.; Punta Descanso, Baja Calif.
- IRIDOPHYCUS CALIFORNICUM (J. Agardh) Dawson Dawson, 1945D; *Iridea californica* in Kylin, 1941 Santa Barbara, Calif.
- IRIDOPHYCUS CORDATUM (Turner) Setchell & Gardner Setchell, 1940; Setchell & Gardner, 1937
 Table and Calvert Is.; Vancouver Is., B. C.; Whidbey Is., Wash.
- IRIDOPHYCUS CORIACEUM Setchell & Gardner Smith, 1944
 Neah Bay, Wash. to Carmel, Calif.
- IRIDOPHYCUS FLACCIDUM Setchell & Gardner Smith, 1944; Sanborn & Doty, 1946 Coos Bay, Oregon to Point Sur, Calif.
- IRIDOPHYCUS FULGENS Setchell & Gardner Setchell & Gardner, 1937
 Trinidad, Humboldt Co. to central Calif.
- 1RIDOPHYCUS FURCATUM Setchell & Gardner Setchell & Gardner, 1937 Sitka, Alaska
- IRIDOPHYCUS HETEROCARPUM (Postels & Ruprecht) Setchell & Gardner Smith, 1944
 Vancouver Is., B. C. to Point Sur, Calif.
- IRIDOPHYCUS LINEARE Setchell & Gardner Smith, 1944
 Sunset Bay, Oregon to Ventura, Calif.
- IRIDOPHYCUS PARKSII Setchell & Gardner Setchell & Gardner, 1937 Trinidad, Calif.
- IRIDOPHYCUS PARVULUM (Kjellman) Setchell & Gardner Setchell & Gardner, 1937 Unalaska; Kodiak Is., Alaska

IRIDOPHYCUS REEDIAE Setchell & Gardner Setchell & Gardner, 1937 Bushnell's Beach, San Luis Obispo Co., Calif.

IRIDOPHYCUS SANGUINEUM Setchell & Gardner Smith, 1944
Cape Arago, Oregon to Pacific Grove, Calif.

IRIDOPHYCUS SINICOLA Setchell & Gardner Setchell & Gardner, 1937 San Francisco Bay, Calif.

IRIDOPHYCUS SPLENDENS Setchell & Gardner Smith, 1944
Cape Kiawandi, Oregon to southern Calif.

IRIDOPHYCUS WHIDBEYANUM Setchell & Gardner Setchell & Gardner, 1937 Whidbey Is., Wash.

Erythrophyllum delesserioides J. Agardh Smith, 1944 Departure Bay, Alaska to San Luis Obispo Co., Calif.

ERYTHROPHYLLUM GMELINI (Grunow) Yendo Setchell & Gardner, 1903 Agattu Is., Alaska

Besa papillaeformis Setchell Smith, 1944 Lands End, San Francisco; Monterey, Calif.

Order RHODYMENIALES

Fam. Rhodymeniaceae

Fauchea crispa Taylor Taylor, 1945 Is. María Magdalena, Nayarit

FAUCHEA FRYEANA Setchell Kylin, 1925 Vicinity of Friday Harbor, Wash.

FAUCHEA LACINIATA J. Agardh Setchell, 1912; Kylin, 1941 Santa Barbara, Calif. FAUCHEA MEDIA Kylin Smith, 1944 Monterey Peninsula, Calif.

Fauchea mollis Howe Dawson, 1944 La Paz, Baja Calif.

FAUCHEA PYGMAEA (Setchell & Gardner) Kylin Kylin, 1941 San Pedro, Calif.

FAUCHEA SEFFERI Howe Dawson, 1944 La Paz, Baja Calif.

FAUCHEOCOLAX ATTENUATA Setchell Smith, 1944 Monterey Peninsula, Calif.

Sciadophycus stellatus Dawson Dawson, 1945A San Diego, Calif.; Is. Cedros, Baja Calif.

Leptofauchea pacifica Dawson Dawson, 1945A Is. Cedros, Baja Calif.

FRYELLA GARDNERI (Setchell) Kylin Kylin, 1931 Friday Harbor to Point Defiance, Wash.

Botryocladia Hancockii Dawson Dawson, 1944 Bahía Agua Verde, Baja Calif.

Botryocladia pseudodichotoma (Farlow) Kylin Smith, 1944; Taylor, 1945 Vancouver Is., B. C. to Is. María Magdalena, Nayarit; Is. Socorro, Revilla Gigedo Arch.

Botryocladia pseudodichotoma var. datilensis Dawson Dawson, 1944 Is. Tiburón, Gulf of Calif.

Botryocladia uvarioides Dawson Dawson, 1944 San Jose del Cabo; Cabo San Lucas, Baja Calif.

Halosaccion Glandiforme (Gmelin) Ruprecht Smith, 1944 Westernmost Aleutian Islands, Alaska to Baja Calif. Halosaccion Ramentaceum (Linnaeus) J. Agardh Setchell & Gardner, 1903 Sannak Is. to Cook Inlet, Alaska

Halosaccion Tilesii Kjellman Setchell & Gardner, 1903 Kukak Bay to Wrangel, Alaska

RHODYMENIA ARBORESCENS Dawson Dawson, 1941
Laguna Beach, Calif.

RHODYMENIA ATTENUATA Dawson Smith, 1944 Monterey to San Pedro, Calif.

RHODYMENIA CALIFORNICA Kylin Smith, 1944; Dawson, 1945; Sanborn & Doty, 1946 Coos Bay, Oregon to San Diego, Calif.

RHODYMENIA DAWSONII Taylor Taylor, 1945 Cabo San Lazaro; Bahía Santa María, Baja Calif.

Rhodymenia divaricata Dawson
Dawson, 1944
Guaymas, Sonora; Is. Angel de la Guarda, Gulf of Calif.

RHODYMENIA HANCOCKII Dawson
Dawson, 1944
Is. Angel de la Guarda, Gulf of Calif.

RHODYMENIA LOBATA Dawson Smith, 1944; Dawson, 1944 Monterey, Calif.; near Is. Isabel, Nayarit

RHODYMENIA LOBULIFERA Dawson Smith, 1944 Bolinas; Carmel; San Pedro, Calif.

RHODYMENIA PACIFICA Kylin Smith, 1944; Dawson, 1945D Coos Bay, Oregon to San Diego, Calif.

RHODYMENIA PALMATA (Linnaeus) Greville Dawson, 1941 Aleutian Is., Alaska; British Columbia; Puget Sound, Wash.

RHODYMENIA PALMATA f. MOLLIS Setchell & Gardner Smith, 1944
Agattu Is., Alaska to Pacific Grove, Calif.

RHODYMENIA PALMATA f. SARNIENSIS (Mertens) J. Agardh Setchell & Gardner, 1903 Kodiak Is. to Orca, Alaska

RHODYMENIA PALMETTIFORMIS Dawson Dawson, 1941; 1945; 1945E La Jolla, Calif.; Cabo Colnett, Baja Calif.

RHODYMENIA PERTUSA (Postels & Ruprecht) J. Agardh Kylin, 1925; Dawson, 1941; Sanborn & Doty, 1946 Alaska to Coos Bay, Oregon

RHODYMENIA RHIZOIDES Dawson Dawson, 1941; 1945 San Pedro to San Diego, Calif.

RHODYMENIA ROSEA Dawson
Dawson, 1944
Is. Angel de la Guarda, Gulf of Calif.

RHODYMENIA STIPITATA Kylin
Dawson, 1941
British Columbia; Puget Sound, Wash.

Rhodymenia (?) tepocensis Dawson Dawson, 1944 Bahía Tepoca, Sonora; Pond Is.; Gulf of Calif.

RHODYMENIOCOLAX BOTRYOIDEA Setchell Dawson, 1945D San Pedro to San Diego, Calif.

Fam. Champiaceae

BINGHAMIELLA CALIFORNICA Setchell & Dawson Setchell & Dawson, 1941 Santa Barbara to Santa Monica, Calif.

BINGHAMIELLA FORKII Dawson Dawson, 1945 La Jolla, Calif.

Lomentaria Baileyana (Harvey) Farlow Taylor, 1945 Revilla Gigedo Arch.; Puerto Culebra, Costa Rica

Lomentaria Caseae Dawson Dawson, 1946 Del Mar, Calif. Lomentaria catenata Harvey

Dawson, 1944

Pond Is. to Is. Tortuga, Gulf of Calif.

Lomentaria Drouetii Dawson

Dawson, 1944

Guaymas, Sonora

Lomentaria hakodatensis Yendo

Dawson, 1944

Is. Guadalupe, Baja Calif.; Is. Angel de la Guarda, Gulf of Calif.; Guaymas, Sonora

CHAMPIA CAESPITOSA Dawson

Dawson, 1944

Is. Angel de la Guarda, Gulf of Calif.

CHAMPIA DISTICHA Dawson

Dawson, 1944

Is. Angel de la Guarda; Is. San Esteban, Gulf of Calif.

CHAMPIA PARVULA (C. Agardh) Harvey

Dawson, 1944

Is. Tiburón, Gulf of Calif. to San Jose del Cabo, Baja Calif.; Is. Clarion, Revilla Gigedo Arch.

GASTROCLONIUM CLAVATUM (Roth) Ardissone

Dawson, 1944

Bahía San Bartholomé, Baja Calif.; Punta Peñasco to Guaymas, Sonora

GASTROCLONIUM COULTERI (Harvey) Kylin

Smith, 1944; Dawson, 1945E

Nootka Sound, B. C. to Cabo Colnett, Baja Calif.

Coeloseira compressa Hollenberg

Smith, 1944

Pacific Grove, Calif. to Punta Banda, Baja Calif.

Coeloseira parva Hollenberg

Hollenberg, 1940

Redondo to La Jolla, Calif.

Order CERAMIALES

Fam. Ceramiaceae

Trailliella intricata (J. Agardh) Batters Kylin, 1925 Friday Harbor, Wash. Antithamnion alternans Gardner Gardner, 1927B Cook Inlet, Alaska

Antithamnion asymmetricum Gardner Gardner, 1927C Sitka, Alaska

Antithamnion Baylesiae Gardner Smith, 1944
Monterey Peninsula, Calif.

Antithamnion defectum Kylin Smith, 1944; Sanborn & Doty, 1946 Friday Harbor, Wash. to Monterey, Calif.

Antithamnion dendroideum Smith & Hollenberg Smith, 1944
Monterey, Calif.

Antithamnion densiusculum Gardner Smith, 1944 Vancouver, B. C.; Puget Sound, Wash.; Pacific Grove, Calif

Antithamnion floccosum (Müller) Kleen Kylin, 1925 Friday Harbor, Wash.

Antithamnion Gardneri J. DeToni J. DeToni, 1935; Antithamnion tenuissimum in Gardner 1927B La Jolla, Calif.

Antithamnion Glanduliferum Kylin Smith, 1944 Puget Sound, Wash. to Carmel, Calif.

Antithamnion Kylinii Gardner Smith, 1944 Victoria, B. C.; Monterey, Calif.

Antithamnion nigricans Gardner Gardner, 1927C Vancouver Is., B. C.

Antithamnion occidentale Kylin Smith, 1944; Dawson, 1945B Puget Sound, Wash.; Carmel; La Jolla, Calif.

Antithamnion pacificum (Harvey) Kylin Smith, 1944; Dawson, 1944 Yakutat Bay, Alaska to La Jolla, Calif.; Bahía Tepoca; Guaymas, Sonora Antithamnion pulchellum Gardner Gardner, 1927C Santa Monica, Calif.

Antithamnion pygmaeum Gardner Smith, 1944 Pacific Grove to San Diego, Calif.

Antithamnion secundatum Gardner Gardner, 1927C San Diego, Calif.

Antithamnion setaceum Gardner Gardner, 1927B San Diego, Calif.

Antithamnion simulans Gardner Gardner, 1927B Sitka, Alaska

Antithamnion sublittorale Setchell & Gardner Dawson, 1944
San Jose del Cabo, Baja Calif.

Antithamnion subulatum (Harvey) J. Agardh Smith, 1944 Puget Sound, Wash.; Monterey, Calif.

Antithamnion uncinatum Gardner Smith, 1944
Puget Sound, Wash. to Carmel, Calif.

Platythamnion heteromorphum J. Agardh Smith, 1944 San Francisco to San Pedro, Calif.

PLATYTHAMNION PECTINATUM Kylin Smith, 1944; Dawson, 1945E Puget Sound, Wash. to San Pedro, Calif.; Cabo Colnett, Baja Calif.

PLATYTHAMNION PECTINATUM var. LAXUM Taylor Taylor, 1945 Is. Clarion, Revilla Gigedo Arch.

PLATYTHAMNION REVERSUM (Setchell & Gardner) Kylin Kylin, 1925 Whidbey Is., Wash.

Platythamnion tepocensis Dawson Dawson, 1944 Bahía Tepoca, Sonora

- PLATYTHAMNION VILLOSUM Kylin Smith, 1944 Sitka, Alaska; Puget Sound, Wash. to Monterey, Calif.
- Callithamnion acutum Kylin Kylin, 1925 San Juan Is., Wash.
- Callithamnion arborescens Gardner Gardner, 1927B Sitka, Alaska
- Callithamnion biseriatum Kylin Smith, 1944 Friday Harbor, Wash.; Monterey, Calif.
- Callithamnion bisporum Gardner Gardner, 1927C San Juan Is., Wash.
- Callithamnion breviramosum Gardner Gardner, 1927C La Jolla, Calif.
- Callithamnion byssoides Arnott Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.
- Callithamnion californicum Gardner Smith, 1944
 Monterey Peninsula, Calif.
- Callithamnion endovaginum Setchell & Gardner Kylin, 1941; Dawson, 1944 La Jolla, Calif.; Guaymas, Sonora
- Callithamnion Laxum Setchell & Gardner Gardner, 1927C Straits of Juan de Fuca; San Juan Co., Wash.
- Callithamnion pacificum Taylor Taylor, 1945 Is. Socorro, Revilla Gigedo Arch.
- Callithamnion Pikeanum Harvey Smith, 1944 Vallenar Point, Alaska to Carmel, Calif.
- CALLITHAMNION PIKEANUM var. PACIFICUM (Harvey)
 Setchell & Gardner
 Gardner, 1927C
 Shumagin Is., Alaska to Straits of Juan de Fuca

- Callithamnion ramosissimum Gardner Gardner, 1927C La Jolla, Calif.
- Callithamnion Rupicolum Anderson Smith, 1944 Fort Ross to La Jolla, Calif.
- Callithamnion soccoriense Taylor Taylor, 1945 Is. Socorro, Revilla Gigedo Arch.
- Callithamnion squarrulosum Harvey Harvey, 1853; J. Agardh, 1876 Golden Gate (San Francisco) Calif.
- Callithamnion veleroae Dawson
 Dawson, 1944
 Is. Angel de la Guarda, Gulf of Calif.; Bahía Tepoca,
 Sonora
- Spyridia filamentosa (Wulfen) Harvey Setchell & Gardner, 1930; Kylin, 1941; Taylor, 1945 Southern Calif.; Is. Guadalupe, Baja Calif.; Is. Taboga, Panamá
- CROUANIA ATTENUATA (Bonnemaison) J. Agardh Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif. ?
- Gymnothamnion elegans (Schousboe) J. Agardh Setchell & Gardner, 1930 Is. Clarion, Revilla Gigedo Arch.
- Haloplegma mexicanum Taylor Taylor, 1945 Is. María Magdalena, Nayarit
- Pleonosporium abysicola Gardner Gardner, 1927B Friday Harbor, Wash.
- PLEONOSPORIUM DASYOIDES (J. Agardh) DeToni Smith, 1944; Dawson, 1946 Tomales Bay to San Pedro, Calif.; Punta Descanso, Baja Calif.
- Pleonosporium polycarpum Gardner Gardner, 1927B La Jolla, Calif.

PLEONOSPORIUM PYGMAEUM Gardner Gardner, 1927B La Jolla, Calif.

PLEONOSPORIUM SQUARROSUM Kylin Kylin, 1925 San Juan Is., Wash.

PLEONOSPORIUM SQUARROSUM var. obovatum Gardner Gardner, 1927C; Dawson, 1945D Sidney, Vancouver Is., B. C.

PLEONOSPORIUM VANCOUVERIANUM J. Agardh
Smith, 1944
Vancouver Is., B. C.; Puget Sound, Wash.; Monterey,
Calif.

Spermothamnion saccorniza (Setchell & Gardner) Feldmann-Mazoyer Feldmann-Mazoyer, 1942; *Pleonosporium saccorhiza* in Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

Spermothamnion Snyderae Farlow Smith, 1944; Dawson, 1945E Bolinas, Calif. to Punta Descanso, Baja Calif.

Griffithsia multiramosa (Setchell & Gardner) Taylor Dawson, 1944; 1945B San Diego, Calif.; Is. Angel de la Guarda, Gulf of California to San Jose del Cabo, Baja Calif.

Griffithsia multiramosa var. balboensis Hollenberg Hollenberg, 1945 Balboa Harbor, Calif.

Griffithsia multiramosa var. minor Taylor Taylor, 1939 Punta Gorda, Baja Calif.

Griffithsia pacifica Kylin Smith 1944; Dawson, 1944; Taylor, 1945 Puget Sound, Wash. to San Diego, Calif.; Bahía Tepoca; Guaymas, Sonora; Is. Clarion, Revilla Gigeda Arch.?

Griffithsia Schoesboei Montagne Collins, 1913 Vancouver Is., B. C. (?) (probably G. pacifica)

Griffithsia tenuis C. Agardh Dawson, 1944 Punta Peñasco, Sonora to Is. Tiburón, Gulf of Calif.

- CERAMIUM AFFINE Setchell & Gardner
 Dawson, 1944
 Is. Guadalupe, Baja Calif.; Is. Angel de la Guarda, Gulf
 of Calif.
- CERAMIUM CALIFORNICUM J. Agardh Kylin, 1941 Puget Sound, Wash. to southern Calif.
- Ceramium Camouii Dawson Dawson, 1944 Turner's Is., Gulf of Calif.
- CERAMIUM CAUDATUM Setchell & Gardner Dawson, 1944
 Is. Angel de la Guarda, Gulf of Calif. to La Paz, Baja Calif.
- CERAMIUM CLARIONENSIS Setchell & Gardner Setchell & Gardner, 1930
 Is. Clarion, Revilla Gigedo Arch.
- CERAMIUM CODICOLA J. Agardh Smith, 1944; Dawson, 1944; 1945E Sitka, Alaska to San Jose del Cabo, Baja Calif.
- CERAMIUM CODIOPHILA Setchell & Gardner Setchell & Gardner, 1937; Dawson, 1945C La Jolla, Calif.; Is. Guadalupe, Baja Calif.
- CERAMIUM EATONIANUM (Farlow) DeToni Smith, 1944; Taylor, 1945; Dawson, 1945E Coos Bay, Oregon to Is. Cedros, Baja Calif.
- CERAMIUM EQUISETOIDES Dawson
 Dawson, 1944
 Bahía Tepoca, Sonora to Mazatlán, Sinaloa
- CERAMIUM EVERMANNII Setchell & Gardner Setchell & Gardner, 1931; Dawson, 1945E Is. Guadalupe, Cabo Colnett, Baja Calif.
- CERAMIUM FASTIGIATUM Harvey
 Taylor, 1939; 1945
 Cabo San Lucas, Baja Calif.; Bahía Petatlán, Guerrero
- CERAMIUM FIMBRIATUM Setchell & Gardner
 Dawson, 1944
 Is. Angel de la Guarda, Gulf of Calif. to San Jose del
 Cabo, Baja Calif.

CERAMIUM GARDNERI Kylin
Smith, 1944
Coos Bay, Oregon to Carmel, Calif.

CERAMIUM GRACILLIMUM Griffiths & Harvey

Dawson, 1944 Is. Guadalupe, Baja Calif.; Turner's Is., Gulf of Calif.; San Jose del Cabo, Baja Calif.

CERAMIUM HORRIDUM Setchell & Gardner

Dawson, 1944

Is. Angel de la Guarda, Gulf of Calif. to Guaymas, Sonora

CERAMIUM ORNATUM Setchell & Gardner Setchell & Gardner, 1930
Is. Guadalupe, Baja Calif.

CERAMIUM PACIFICUM (Collins) Kylin Smith, 1944; Dawson, 1945E Vancouver Is., B. C. to Santa Barbara, Calif.; Punta Descanso, Baja Calif.

CERAMIUM PANICULATUM Okamura Dawson, 1944 Guaymas, Sonora

CERAMIUM PERSONATUM Setchell & Gardner Setchell & Gardner, 1930; Taylor, 1945 Is. Guadalupe, Baja Calif.; Port Parker, Costa Rica

CERAMIUM PROCUMBENS Setchell & Gardner
Dawson, 1944
Bahía San Francisquito, Baja Calif.; Is. Partida, Gulf
of Calif.

CERAMIUM RUBRUM (Hudson) C. Agardh Setchell & Gardner, 1903; Collins, 1913 Bering Sea to Puget Sound, Wash.

CERAMIUM SERPENS Setchell & Gardner

Dawson, 1944

Is. Angel de la Guarda, Gulf of Calif. to La Paz, Baja Calif.

CERAMIUM SINICOLA Setchell & Gardner

Dawson, 1944

Is. Angel de la Guarda, Gulf of Calif. to Guaymas, Sonora

CERAMIUM SINICOLA var. INTERRUFTUM (Setchell & Gardner)
Dawson

Dawson, 1944

Near La Paz, Baja Calif.

CERAMIUM SINICOLA var. JOHNSTONII (Setchell & Gardner)
Dawson
Dawson, 1944
Is. San Esteban; Is. San Pedro Martir, Gulf of Calif.

CERAMIUM STRICTUM Harvey Collins, 1913 Vancouver Is., B. C.

CERAMIUM WASHINGTONIENSE Kylin Kylin, 1925 San Juan Is., Wash.

CERAMIUM ZACAE Setchell & Gardner Setchell & Gardner, 1937A; Dawson, 1945E Cabo Colnett; Bahía San Bartolomé, Baja Calif.

CERAMIUM ZEBRINUM J. Agardh J. Agardh, 1894 Santa Cruz, Calif.

Centroceras bellum Setchell & Gardner Dawson, 1944
Guaymas, Sonora

Centroceras clavulatum (C. Agardh) Montagne Smith, 1944; Dawson, 1944; 1945E; Taylor, 1945 Santa Cruz, Calif. to Panamá

Microcladia Borealis Ruprecht Smith, 1944 Unalaska, Alaska to San Simeon, Calif.

MICROCLADIA CALIFORNICA Farlow Smith, 1944 San Francisco to San Diego, Calif.

Microcladia Coulteri Harvey Smith, 1944; Dawson, 1945E Vancouver Is., B. C. to Punta Descanso, Baja Calif.

Ptilota Asplenioides (Turner) C. Agardh Setchell & Gardner, 1903 Alaska to Puget Sound, Wash.

Ptilota Californica Ruprecht Smith, 1944 Cape Arago, Oregon to San Diego, Calif.

PTILOTA DENSA C. Agardh Smith, 1944; Dawson, 1945B Tomales Bay to San Diego, Calif. PTILOTA FILICINA (Farlow) J. Agardh Smith, 1944 Bering Sea to Carmel, Calif.

PTILOTA HYPNOIDES Harvey Smith, 1944 Sitka, Alaska to San Luis Obispo Co., Calif.

PTILOTA PECTINATA (Gunner) Kjellman Setchell & Gardner, 1903; Kylin, 1925 Bering Sea to Puget Sound, Wash.

PTILOTA TENUIS Kylin Kylin, 1925 Friday Harbor, Wash.

Fam. Delesseriaceae

Branchioglossum Woodii (J. Agardh) Kylin Smith, 1944; Dawson, 1944 Vancouver Is., B. C.; Monterey to Santa Barbara, Calif.; Puerto Libertad to Guaymas, Sonora

Hypoglossum abyssicolum Taylor

Taylor, 1945

Is. Las Tres Marías, Nayarit; Puerto Culebra, Costa Rica

Hypoglossum attenuatum Gardner Dawson, 1944 Puerto Libertad to Guaymas, Sonora

Hypoglossum retusum Dawson Dawson, 1945A Is. Cedros, Baja Calif.

Membranoptera denticulata (Montagne) Kylin Kylin, 1924; *Pteridium spinulosum* in Setchell & Gardner, 1903 Bering Sea to Morzhovoi Bay, Alaska

Membranoptera dimorpha Gardner Gardner, 1926; Sanborn, & Doty, 1946 Queen Charlotte Is., В. С. to Coos Bay, Oregon

Membranoptera multiramosa Gardner Smith, 1944 San Mateo Co. to Monterey, Calif.

- Мемвичения Регоричения (Setchell & Gardner) Kylin Kylin, 1925
 Puget Sound to Pleasant Beach, Wash.
- Membranoptera Setchellii Gardner Gardner, 1926 Morzhovoi Bay, Alaska
- Membranoptera tenuis Kylin Kylin, 1925 Friday Harbor, Wash.
- Membranoptera Weeksiae Setchell & Gardner Jao, 1937; Smith, 1944; Dawson, 1946 Seattle, Wash.; San Francisco to San Diego, Calif.
- Holmesia californica (Dawson) Dawson Dawson, 1945D San Diego, Calif.
- Delesseria decipiens J. Agardh Smith, 1944 Prince William Sound, Alaska to Carmel, Calif.
- Platysiphonia Clevelandii (Farlow) Papenfuss Papenfuss, 1944 Pacific Grove to San Diego, Calif.
- Taenioma perpusillum J. Agardh Dawson, 1944; Papenfuss, 1944 Bahía Gonzaga to Bahía Agua Verde, Baja Calif.
- ERYTHROGLOSSUM CALIFORNICUM J. Agardh Smith, 1944 Monterey to Santa Barbara, Calif.
- Erythroglossum intermedium (J. Agardh) Kylin Kylin, 1944 Esquimault, B. C.
- Sorella delicatula (Gardner) Hollenberg Hollenberg, 1943 San Pedro, Calif.
- Sorella delicatula var. californica Hollenberg Hollenberg, 1943 Southern Calif.
- Sorella divaricata (Setchell & Gardner) Hollenberg
 Hollenberg, 1943; Erythroglossum divaricata in Smith,
 1944
 Pacific Grove, Calif.

- Sorella Pinnata Hollenberg Hollenberg, 1943; Dawson, 1944 Southern Calif.; Is. Angel de la Guarda, Gulf of Calif.
- Grinnellia lanceolata Dawson Dawson, 1944 Punta Gorda, Cape district, Baja Calif.
- Polyneura Latissima (Harvey) Kylin Smith, 1944; Dawson, 1945A Vancouver, B. C. to Is. Cedros, Baja Calif.
- Polyneurella Hancockii Dawson Dawson, 1944 Is. Angel de la Guarda, Gulf of Calif.
- NIENBURGIA ANDERSONIANA (J. Agardh) Kylin Smith, 1944; Taylor, 1945; Dawson, 1945E Santa Cruz, Calif. to Is. Cedros, Baja Calif.
- NIENBURGIA BOREALIS (Kylin) Kylin Kylin, 1935; Heteronema boreale in Kylin, 1925 Friday Harbor, Wash.
- Phycodrys Ambigua Gardner Gardner, 1927A Sitka, Alaska
- PHYCODRYS BULLATA Gardner Gardner, 1927A Agattu Is. to Sitka, Alaska
- Phycodrys Riggii Gardner
 Gardner, 1927A
 Kukak Bay to Prince William Sound, Alaska
- Phycodrys Setchellii Skottsberg Smith, 1944; Dawson, 1945A; 1945E Bolinas, Calif. to Is. Cedros, Baja Calif.
- Polycoryne Gardneri Setchell Smith, 1944 Marin Co.; Monterey Peninsula, Calif.
- Polycoryne phycodricola Dawson Dawson, 1945A Is. Cedros, Baja Calif.
- Anisocladella pacifica Kylin Smith, 1944; Dawson, 1945E Santa Cruz, Calif. to Cabo Colnett, Baja Calif.
- Myriogramme divaricata Dawson
 Dawson, 1944
 Is. Angel de la Guarda, Gulf of Calif.

Myriogramme Hollenbergii Kylin Smith, 1944 Monterey, Calif.

Myriogramme Pulchra Gardner Gardner, 1926 Puget Sound to Tacoma, Wash.

Myriogramme repens Hollenberg Hollenberg, 1945 Point Vicente, Calif.

Myriogramme spectabilis (Eaton) Kylin Smith, 1944 Santa Cruz to Redondo, Calif.

Acrosorium uncinatum (J. Agardh) Kylin Kylin, 1941; Taylor, 1945; Dawson, 1945A; 1945E Southern Calif. to Bahía Santa María, Baja Calif.

Pantoneura Baerii (Ruprecht) Kylin Kylin, 1924 Sitka, Alaska

Pantoneura Juergensii (J. Agardh) Kylin Kylin, 1924 Bering Sea to Unalaska, Alaska

NITOPHYLLUM MIRABILE Kylin Kylin, 1925 Friday Harbor, Wash.

HYMENENA FLABELLIGERA (J. Agardh) Kylin Smith, 1944 Puget Sound, Wash. to Carmel, Calif.

Hymenena Kylinii Gardner Smith, 1944 San Francisco to Monterey, Calif.

Hymenena multiloba (J. Agardh) Kylin Smith, 1944 Cape Mendocino to Carmel, Calif.

Hymenena Setchellii Gardner Smith, 1944 Puget Sound, Wash. to Carmel, Calif.

HYMENENA SMITHII Kylin Smith, 1944 Carmel, Calif.

CRYPTOPLEURA BREVIS Gardner Gardner, 1927 Moss Beach, San Mateo Co., Calif.

- CRYPTOPLEURA CORALLINARA (Nott) Gardner Gardner, 1927 San Diego Co., Calif.
- Cryptopleura crispa Kylin Kylin, 1941; Dawson, 1945E La Jolla, Calif.; Punta Descanso, Baja Calif.
- CRYPTOPLEURA DICHOTOMA Gardner Gardner, 1927 San Pedro, Calif.
- CRYPTOPLEURA LOBULIFERA (J. Agardh) Kylin Smith, 1944; Taylor, 1945 Tomales Bay to Morro Bay, Calif.; Bahía Santa María, Baja Calif.
- CRYPTOPLEURA RUPRECHTIANA (J. Agardh) Kylin Kylin, 1925 Sitka, Alaska to northern Calif.
- Cryptopleura spatulata Gardner Gardner, 1927 Santa Barbara; San Pedro, Calif.
- CRYPTOPLEURA VIOLACEA (J. Agardh) Kylin Smith, 1944; Dawson, 1945B; 1945E Vancouver Is., B. C. to Cabo Colnett, Baja Calif.
- Botryoglossum Farlowianum (J. Agardh) G. DeToni Smith, 1944; Dawson, 1945B Puget Sound, Wash. to San Diego, Calif.
- GONIMOPHYLLUM SKOTTSBERGII Setchell Smith, 1944; Dawson, 1945C Fridav Harbor, Wash. to San Diego, Calif.

Fam. Dasyaceae

- Dasya californica Gardner Gardner, 1927A; Dawson, 1945B Southern Calif.
- DASYA EASTWOODAE Setchell & Gardner Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.
- Dasya pedicellata C. Agardh
 Dawson, 1944
 Is. Angel de la Guarda, Gulf of Calif. to Guaymas, Sonora

Dasya Stanfordiana Farlow Setchell & Gardner, 1930; Taylor, 1945 Is. Guadalupe, Baja Calif.; Is. Las Tres Marías, Nayarit

Dasyopsis Densa G. M. Smith Smith, 1944 Santa Cruz to Carmel, Calif.

Dasyopsis plumosa (Harvey & Bailey) Schmitz Kylin, 1925; Collins, 1913 Vancouver Is., B. C. to northern Calif.

Pogonophora californica J. Agardh Kylin, 1941; Dawson, 1945B; 1945E Santa Barbara, Calif. to Punta Descanso, Baja Calif.

Heterosiphonia asymmetria Hollenberg Hollenberg, 1945 Corona del Mar, Calif.

Heterosiphonia densiuscula Kylin Kylin, 1925 Friday Harbor, Wash.

HETEROSIPHONIA ERECTA Gardner Gardner, 1927D; Setchell & Gardner, 1937A; Taylor, 1945 Santa Monica, Calif. to Bahía Santa María, Baja Calif.

Heterosiphonia Laxa Kylin Kylin, 1925 Friday Harbor, Wash.

Heterosiphonia sinicola Setchell & Gardner Dawson, 1944 Near La Paz, Baja Calif.

Fam. Rhodomelaceae

Orcasia senticulosa (Harvey) Kylin Kylin, 1941 Orcas Is., Wash.; Monterey, Calif.

Polysiphonia acuminata Gardner Hollenberg, 1942A; Smith, 1944 Monterey to La Jolla, Calif.

Polysiphonia bifurcata Hollenberg Taylor, 1945 Playa Blancas, Costa Rica

- Polysiphonia Brodiaei (Dillwyn) Greville Hollenberg, 1944; Smith, 1944 Sausalito to Santa Monica, Calif.
- Polysiphonia Collinsii Hollenberg Hollenberg, 1944; Dawson, 1945E San Juan Co., Wash. to Cabo Colnett, Baja Calif.
- Polysiphonia Collinsii var. compacta Hollenberg Hollenberg, 1944 Pacific Grove to southern Calif.
- Polysiphonia Collinsii var. deliquescens Hollenberg Hollenberg, 1944 Prince William Sound, Alaska to Friday Harbor, Wash.
- Polysiphonia Collinsii var. Luxurians Hollenberg Hollenberg, 1944 Cape Flattery; Friday Harbor, Wash.
- Polysiphonia concinna Hollenberg
 Hollenberg, 1944
 Santa Catalina Is.; La Jolla, Calif.
- Polysiphonia decussata Hollenberg Hollenberg, 1942A Los Angeles Co. to San Diego Co., Calif.
- Polysiphonia dichotoma Hollenberg Hollenberg, 1944 Santa Cruz; San Diego, Calif.
- Polysiphonia Eastwoodae Setchell & Gardner Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.
- Polysiphonia flaccidissima Hollenberg Hollenberg, 1942A Southern Calif.
- Polysiphonia flaccidissima var. Smithii Hollenberg Hollenberg, 1942A; Smith, 1944 San Francisco to San Diego, Calif.
- Polysiphonia Guadalupensis Setchell & Gardner Hollenberg, 1944
 Is. Guadalupe, Baja Calif.
- Polysiphonia Hancockii Dawson Dawson, 1944 San Jose del Cabo, Baja Calif.

Polysiphonia Hendryi Gardner Smith, 1944; Hollenberg, 1944; Taylor, 1945 Cape Arago, Oregon to Is. Cedros, Baja Calif.

Polysiphonia homoia Setchell & Gardner Hollenberg, 1944; Taylor, 1945 Is. Guadalupe, Baja Calif.; Is. Socorro, Revilla Gigedo Arch.

Polysiphonia Howei Hollenberg Taylor, 1945 Bahía de Panamá, Panamá

Polysiphonia inconspicua Hollenberg Hollenberg, 1944 Southern Calif.

Polysiphonia Johnstonii Setchell & Gardner Hollenberg, 1944 Is. Angel de la Guarda; Is. San Esteban, Gulf of Calif.

Polysiphonia Macounii Hollenberg Hollenberg, 1942A Vancouver, B. C.

Polysiphonia Marchantae Setchell & Gardner Hollenberg, 1944 La Paz, Baja Calif.

Polysiphonia Masonii Setchell & Gardner Hollenberg, 1942A
Is. Guadalupe, Baja Calif.

Polysiphonia minutissima Hollenberg Hollenberg, 1942A; Dawson, 1945B Santa Catalina Is., Calif. to Punta Banda, Baja Calif.

Polysiphonia pacifica Hollenberg Hollenberg, 1942A; Smith, 1944 Sitka, Alaska to Baja Calif.

Polysiphonia pacifica var. delicatula Hollenberg Hollenberg, 1942A Central Calif. to Gulf of Calif.

Polysiphonia pacifica var. determinata Hollenberg Hollenberg, 1942A Alaska to central Calif.

Polysiphonia pacifica var. disticha Hollenberg Hollenberg, 1942A Vancouver Is., B. C. to central Calif. Polysiphonia pacifica var. gracilis Hollenberg Hollenberg, 1942A British Columbia to central Calif.

Polysiphonia paniculata Montagne Hollenberg, 1944; Polysiphonia californica in Smith, 1944; Dawson, 1944 Port Holmes, B. C. to Baja Calif.; Punta Peñasco, Sonora

Polysiphonia pungens Hollenberg Hollenberg, 1942A Alaska to Vancouver, B. C.

Polysiphonia simplex Hollenberg Hollenberg, 1942A; Dawson, 1944 Southern Calif.; Bahía Gonzaga to Bahía Agua Verde, Baja Calif.

Polysiphonia Snyderae Kylin Hollenberg, 1942A; Dawson, 1944 Washington to central Mexico

Polysiphonia Snyderae var. Heteromorpha Hollenberg Hollenberg, 1942A Vancouver, B. C.; coast of Washington

Polysiphonia Snyderae var. intricata Hollenberg Hollenberg, 1942A Guaymas, Sonora

Polysiphonia sonorensis Hollenberg Hollenberg, 1942A; Dawson, 1944 Guaymas; Empalme, Sonora

Bryocladia dictyurus (J. Agardh) Taylor Taylor, 1945 Bahía Petatlán, Guerrero

Rhodosiphonia californica Hollenberg Hollenberg, 1943 Santa Barbara to San Diego, Calif.

Lophosiphonia mexicana Dawson
Dawson, 1944
Is. Angel de la Guarda, Gulf of Calif.; Is. Clarion,
Revilla Gigedo Arch.

LOPHOSIPHONIA OBSCURA (C. Agardh) Falkenberg Kylin, 1925 Friday Harbor, Wash. ?

LOPHOSIPHONIA VILLUM (J. Agardh) Setchell & Gardner Smith, 1944; Dawson, 1944; Taylor, 1945
Pacific Grove, Calif. to Golfo Dulce, Costa Rica

Brogniartella mucronata (Harvey) Schmitz Taylor, 1945 Is. María Magdalena, Navarit

Veleroa subulata Dawson Dawson, 1944 Bahía Tepoca, Sonora

FALKENBERGIA HILLEBRANDTII (Bornet) Falkenberg Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.

Pterosiphonia arctica Setchell & Gardner Kylin, 1925
Alaska to Puget Sound, Wash.

Pterosiphonia Baileyi (Harvey) Falkenberg Smith, 1944; Taylor, 1945; Dawson, 1945E Crescent City, Calif. to Is. Cedros, Baja Calif.

Pterosiphonia bipinnata (Postels & Ruprecht) Falkenberg
Smith, 1944
Shumagin Is., Alaska to San Pedro, Calif.

Pterosiphonia californica Kylin Kylin, 1941 La Jolla, Calif.

Pterosiphonia dendroidea (Montagne) Falkenberg Smith, 1944; Dawson, 1944; 1945E; Taylor, 1945 Vancouver Is., B. C. to San Jose del Cabo, Baja Calif.

Pterosiphonia Gracilis Kylin Kylin, 1925; Sanborn & Doty, 1946 Friday Harbor, Wash. to Coos Bay, Oregon

Pterosiphonia pennata (Roth) Falkenberg Dawson, 1944 Bahía Tepoca, Sonora

Pterosiphonia Robusta Gardner Gardner, 1927D Northern to central Calif.

Pterosiphonia robusta var. divaricata Gardner Gardner, 1927D Sitka, Alaska

Pterosiphonia robusta var. inermis Gardner Gardner, 1927D Neah Bay, Wash. to San Francisco Bay, Calif.

Stromatocarpus Gardneri Setchell Setchell, 1923; Dawson, 1945C Santa Monica to La Jolla, Calif. Pterochondria pygmaea (Setchell) Hollenberg Hollenberg, 1942 Southern Calif.

Pterochondria Woodii (Harvey) Hollenberg Smith, 1944; Dawson, 1945E Vancouver, B. C. to San Pedro, Calif.; Cabo Colnett, Baja Calif.

Herposiphonia grandis Kylin Kylin, 1925; Sanborn & Doty, 1946 Friday Harbor, Wash. to Coos Bay, Oregon

Herposiphonia parva Hollenberg
Hollenberg, 1943; Herposiphonia pygmaea (by error) in
Smith, 1944
Monterey, Calif. to Punta Banda, Baja Calif.

Herposiphonia rigida Gardner Smith, 1944 Puget Sound, Wash. to Santa Monica, Calif.

Herposiphonia rigida var. Laxa Setchell & Gardner Setchell & Gardner, 1930
Is. Guadalupe, Baja Calif.

Herposiphonia secunda (C. Agardh) Ambronn Taylor, 1945 Is. Jicarita, Panamá

Herposiphonia subdisticha Okamura Dawson, 1944 Is. San Esteban, Gulf of Calif.

Herposiphonia tenella (C. Agardh) Nägeli Dawson, 1944; Taylor, 1945 Kino, Sonora to Is. Las Tres Marías, Nayarit

Herposiphonia verticillata (Harvey) Kylin Smith, 1944 San Francisco, Calif. to Ensenada, Baja Calif.

Amplisiphonia pacifica Hollenberg Smith, 1944; Dawson, 1945C Moss Beach, San Mateo Co., Calif. to Bahía de Todos Santos, Baja Calif.

Jantinella sinicola (Setchell & Gardner) Kylin Dawson, 1944; Setchell & Gardner, 1930 La Pas, Baja Calif.; Is. Clarion, Revilla Gigedo Arch.

Jantinella verrucaeformis (Setchell & McFadden) Kylin Kylin, 1941 San Pedro, Calif.

- Chondria Acrorhizophora Setchell & Gardner Setchell & Gardner, 1924
 Near La Paz, Baja Calif.
- CHONDRIA ARCUATA Hollenberg
 Hollenberg, 1945
 Corona del Mar; Laguna Beach, Calif.
- Chondria californica (Collins) Kylin Kylin, 1941; Taylor, 1945; Dawson, 1944; 1945E La Jolla, Calif. to Puerto Culebra, Costa Rica; Gulf of Calif.
- CHONDRIA CLARIONENSIS Setchell & Gardner Setchell & Gardner, 1930
 Is. Clarion, Revilla Gigedo Arch.
- Chondria cuscutoides Dawson Dawson, 1946 La Jolla, Calif.
- CHONDRIA DASYPHYLLA (Woodward) C. Agardh Dawson, 1944; 1946 Bahía Gonzaga, Baja Calif. to Guaymas, Sonora
- CHONDRIA DECIPIENS Kylin Smith, 1944; Dawson, 1945B Santa Cruz to La Jolla, Calif.
- CHONDRIA NIDIFICA Harvey Kylin, 1941; Dawson, 1945E La Jolla, Calif.; Cabo Colnett, Baja Calif.
- Chondria oppositicada Dawson Dawson, 1946 La Jolla, Calif.
- CHONDRIA PACIFICA Setchell & Gardner Setchell & Gardner, 1937A
 Bahía San Bartholomé, Baja Calif.
- Chondria Platyclada Taylor Taylor, 1945 Puerto Culebra, Costa Rica
- Chondria secundata (J. Agardh) DeToni DeToni, 1903 Santa Barbara, Calif.
- Chondria telmoensis Dawson
 Dawson, 1946
 La Jolla, Calif.: Cabo Colnett, Baja Calif.
- Laurencia clarionensis Setchell & Gardner Setchell & Gardner, 1937A; Taylor, 1945 Is. Clarion, Revilla Gigedo Arch.

- LAURENCIA CRISPA Hollenberg Smith, 1944 Monterey Peninsula, Calif.
- Laurencia diegoensis Dawson Dawson, 1944A; 1945E Santa Monica to Cabo Colnett, Baja Calif.
- Laurencia estebaniana Setchell & Gardner Dawson, 1944 Smith Is.; Is. San Esteban, Gulf of Calif.
- Laurencia Gardneri Hollenberg Smith, 1944 Monterey Peninsula, Calif.
- Laurencia Hancockii Dawson Dawson, 1944 Bahía Agua Verde, Baja Calif.
- Laurencia Humilis Setchell & Gardner Setchell & Gardner, 1930 Is. Clarion, Revilla Gigedo Arch.
- Laurencia intricata Lamouroux Taylor, 1945 Bahía Petatlán, Guerrero
- Laurencia Johnstonii Setchell & Gardner
 Dawson, 1944
 Bahía San Francisquito, Baja Calif.; Is. San Marcos;
 Is. Tiburón, Gulf of Calif.
- LAURENCIA MASONII Setchell & Gardner Setchell & Gardner, 1930 Is. Guadalupe, Baja Calif.
- Laurencia obtusiuscula Setchell & Gardner Dawson, 1944 Guaymas, Sonora to San Jose del Cabo, Baja Calif.
- Laurencia Pacifica Kylin Smith, 1944; Dawson, 1945E Pacific Grove, Calif. to Punta Descanso, Baja Calif.
- LAURENCIA PANICULATA (C. Agardh) J. Agardh Dawson, 1944 Bahía Gonzaga to Bahía Agua Verde, Baja Calif.
- Laurencia papillosa var. pacifica Setchell & Gardner Dawson, 1944; Setchell & Gardner, 1930 Is. Guadalupe; La Paz, Baja Calif.; Is. Tiburón, Gulf of Calif.

Laurencia peninsularis Taylor Taylor, 1945 Cabo San Lazaro, Baja Calif.

Laurencia scrippsensis Dawson Dawson, 1944 La Jolla, Calif.

Laurencia sinicola Setchell & Gardner
Dawson, 1944
Is. San Marcos, Gulf of Calif.; Eureka, near La Paz,
Baja Calif.

Laurencia Snyderae Dawson Dawson, 1945 La Jolla, Calif.

Laurencia spectabilis Postels & Ruprecht Smith, 1944; Dawson, 1944A Sitka, Alaska to Santa Monica, Calif.

Laurencia splendens Hollenberg Smith, 1944; Dawson, 1945E Santa Cruz, Calif. to Cabo Colnett, Baja Calif.

LAURENCIA SUBOPPOSITA (J. Agardh) Setchell Dawson, 1944A; Kylin, 1941 La Jolla to San Diego, Calif.

Laurencia voragina Taylor Taylor, 1945 White Friars Is., Guerrero

RICARDIA SACCATA (J. Agardh) Kylin Smith, 1944 Pacific Grove to La Jolla, Calif.; Is. Guadalupe, Baja Calif.

Janczewskia Gardneri Setchell & Guernsey Smith, 1944; Dawson, 1945B; 1945E Vancouver Is.. B. C. to Cabo Colnett, Baja Calif.

JANCZEWSKIA LAPPACEA Setchell Kylin, 1941; Dawson, 1945E San Pedro, Calif. to Cabo Colnett, Baja Calif.

Janczewskia moriformis Setchell Setchell, 1914 Santa Monica, Calif.

Janczewskia Solmsii Setchell & Guernsey Setchell, 1914; Setchell & Gardner, 1930; Dawson, 1945B Redondo to San Diego, Calif.; Is. Guadalupe, Baja Calif.

- DIGENIA SIMPLEX (Wulfen) C. Agardh Dawson, 1944; Taylor, 1945 Gulf of Calif. to Costa Rica
- Bryothamnion Pacificum Taylor Taylor, 1945 Is. María Magdalena, Nayarit
- Rhodomela Larix (Turner) C. Agardh Smith, 1944 Bering Sea to San Luis Obispo Co., Calif.
- RHODOMELA LYCOPODIOIDES (Linnaeus) C. Agardh Setchell & Gardner, 1903; Collins, 1913 Alaska to Vancouver, B. C.
- Odonthalia dentata (Linnaeus) Lyngbye Setchell & Gardner, 1903 Alaska to Victoria, B. C.
- ODONTHALIA FLOCCOSA (Esper) Falkenberg Smith, 1944 Puget Sound, Wash. to Santa Barbara, Calif.
- Odonthalia kamtschatica (Ruprecht) J. Agardh Kylin, 1925 Alaska to Puget Sound, Wash.
- Odonthalia Lyallii (Harvey) J. Agardh Kylin, 1925 Puget Sound, Wash.
- Odonthalia washingtoniensis Kylin Kylin, 1925; Sanborn & Doty, 1946 Victoria, B. C. to Coos Bay, Oregon
- Bostrychia Calliptera (Montagne) Montagne Taylor, 1945 Panamá
- Bostrychia radicans Montagne Dawson, 1944 Guaymas, Sonora
- Bostrychia tenella J. Agardh Taylor, 1945 Golfo Dulce, Costa Rica

LITERATURE CITED

- Agardh, J. G. 1852. Species genera et ordines algarum. Vol. 2, Pt. 2, pp. 337-720. Lund.
 - 1876. Species genera et ordines algarum. Vol. 3, Pt. 1. Epicrisis systematis floridearum. 724 pp. Lund.
 - 1894. Analecta algologica: observationes de speciebus minus cognitis earumque dispositione, Continuatio II. Actis Soc. Physiog. Lundensis, 30: 1-98.
 - 1899. Analecta algologica: observationes de speciebus minus cognitis earumque dispositione, Continuatio V. *Ibid.*, N. S. 10: 1-160.
- Collins, F. S. 1913. The marine algae of Vancouver Island. Bull. Victoria Memorial Museum, 1: 99-137.
- Connell, R. 1928. Notes on marine algae collected at Departure Bay, B. C. Can. Field Nat., 42(4):99-100.
- Dawson, E. Y. 1941. A review of the genus Rhodymenia with descriptions of new species. Allan Hancock Pacific Exped., 3: 123-180. 13 pls.
 - 1944. The marine algae of the Gulf of California. *Ibid.*, 3: 189-454. 47 pls.
 - 1944a. Some new Laurenciae from southern California. *Madroño*, 7(8):233-240. 3 pls.
 - 1944b. A new parasitic red alga from southern California. Bull. Torrey Bot. Club, 77(6): 655-657. 1 pl.
 - 1945. Notes on Pacific Coast marine algae, I. Bull. So. Calif. Acad. Sci., 43(3): 95-101. 1 pl.
 - 1945a. Some new and unreported sublittoral algae from Cerros Island,* Mexico. *Ibid.*, 43(3): 102-112. 3 pls.
 - 1945b. An annotated list of the marine algae and marine grasses of San Diego County, California. Occas. Papers San Diego Soc. Nat. Hist., (7): 1-87.
 - 1945c. Notes on Pacific Coast marine algae, II. Bull So. Calif. Acad. Sci., 44(1): 22-27. 2 pls.
 - 1945d. Notes on Pacific Coast marine algae, III. *Madroño.* 8(3): 93-97. 1 pl.
 - 1945e. Marine algae associated with upwelling along the northwestern coast of Baja California, Mexico., Bull. So. Calif. Acad. Sci., 44(2): 57-71. 3 pls.
 - New and unreported marine algae from southern California and northwestern Mexico. *Ibid.*, 44(3): 75-91. 20 figs.
- De Toni, G. B. 1897-1924. Sylloge algarum omnium hucusque cognitarum. 4 (Sylloge Floridearum) (1): I-XX, I-LXI, 1-388. 1897; (2): 387-776. 1900; (3) 775-1522. 1903; (4): 1523-1973. 1905; 6 (Sylloge Floridearum) (5 Additimenta): I-XI, 1-767. 1924. Patavii.
- De Toni, J. 1935. Noterelle di nomenclature algologica. V. L'Antithamnion tenuissimum Gardner 1927. Published by the author. Brescia.
 - 1936. Noterelle di nomenclature algologica, VII. Primo elenco di Floridee omonime. Published by the author. Brescia.
- Feldmann, J. et G. 1942. Recherches sur les Bonnemaisoniacées et leur alternance de generations. *Ann. des Sci. Nat.*, *Bot.*, ser. 11, 3: 75-175. 26 figs.
- *According to Mexican authorities the spelling should be "Cedros."

- Feldmann-Mazoyer, G. 1942. A propos de quelques Spermothamnion a polysporanges. Bull. Soc. d'Hist. Nat. de l'Afrique Nord, 33: 15-18.
- Foslie, M. H. 1929. Contributions to a monograph of the Lithothamnia. 60 pp. 75 pls. Trondhjem.
- Gardner, N. L. 1926. New Rhodophyceae from the Pacific Coast of North America. I. Univ. Calif. Publ. Bot., 13: 205-226. 7 pls.
 - 1927. New Rhodophyceae from the Pacific Coast of North America. II. *Ibid.*, 13:235-272. 12 pls.
 - 1927a. New Rhodophyceae from the Pacific Coast of North America. III. *Ibid.*, 13:333-368. 13 pls.
 - 1927b. New Rhodophyceae from the Pacific Coast of North America. IV. *Ibid.*, 13:373-402. 11 pls.
 - 1927c. New Rhodophyceae from the Pacific Coast of North America. V. *Ibid.*, 13:403-434. 10 pls.
 - 1927d. New Rhodophyceae from the Pacific Coast of North America. VI. *Ibid.*, 14:99-138. 17 pls.
 - 1927e. New species of Gelidium on the Pacific Coast of North America. *Ibid.*, 13:273-318. 19 pls.
 - 1940. New species of Melanophyceae from the Pacific Coast of North America. *Ibid.*, 19:267-286. 6 pls.
- Harvey, W. H. 1853. Nereis Boreali-Americana. Part II. Rhodospermae. Smithsonian Contr. to Knowledge, 3(5): 1-258. 24 pls.
- Hollenberg, G. J. 1940. New marine algae from southern California. I. Amer. Journ. Bot., 27 (10):868-877. 17 figs.
 - 1941. Culture studies of marine algae. II. Hapterophycus canaliculatus S. & G. *Ibid.*, 28(8):676-683. 16 figs.
 - 1942. Phycological notes—I. Bull. Torrey Bot. Club, 69: 528-538. 15 figs.
 - 1942a. An account of the species of Polysiphonia on the Pacific Coast of North America. I. Oligosiphonia. *Amer. Journ. Bot.*, 29:772-785. 21 figs.
 - 1943. New marine algae from southern California. II. *Ibid.*. 30:-571-579. 16 figs.
 - 1944. An account of the species of Polysiphonia on the Pacific Coast of North America. II. Polysiphonia. *Ibid.*, 31:474-483. 12 figs.
 - 1945. New marine algae from southern California. III. *Ibid.*, 32:-447-451. 9 figs.
- Jao, C. 1937. New marine algae from Washington. Pap. Mich. Acad. Sci., Arts and Letters, 22:99-116. 3 pls.
- Kylin, H. 1924. Studien über die Delesseriaceen. Lunds Univ. Årsskr., N. F., 20(6):1-111. 80 figs.
 - 1925. The marine algae in the vicinity of the biological station at Friday Harbor, Wash. *Ibid.*, 21(9):1-87. 47 figs.
 - 1932. Die Florideenordnung Gigartinales. *Ibid.*, 28(8): 1-88. 22 figs. 28 pls.
 - 1935. Zur Nomenclature einigen Delesseriaceen. Förhandl. Kgl. Fysiografiska Sällsk. i Lund, 5(23):1-5.
 - 1940. Die Phaeophyceenordnung Chordariales. Lunds Univ. Årsskr., N. F., 36(9):1-67. 30 figs. 8 pls.
 - 1941. Californische Rhodophyceen. Ibid., 37(2):1-51. 7 figs. 13 pls.
- Lemoine, Mme. P. 1929. Les Corallinacées de l'Archipel des Galapagos et du Golfe de Panama. Arch. du Mus. d'Hist. Nat. VI, 4: 37-88. 35 figs., 4 pls.

- Levring, T. 1940. Die Phaeophyceengattungen Chlanidophora, Distromium und Syringoderma. Kgl. Fysiografiska Sällsk. i Lund, 10(20):1-11.
- Manza, A. V. 1937. Some north Pacific species of articulated corallines. *Proc. Nat. Acad. Sci. of U. S. A.*, 23:561-567.
 - 1940. A revision of the genera of articulated corallines. *Philippine Journ. Sci.*, 71:239-316. 20 pls.
- Papenfuss, G. 1943. Notes on algal nomenclature. III. Miscellaneous species of Chlorophyceae, Phaeophyceae and Rhodophyceae. Farlowia, 1(3):337-346.
 - 1944. Structure and taxonomy of Taenioma, including a discussion on the phylogeny of the Ceramiales. $Madro\tilde{n}o$, 7(7):193-214. 2 pls. 1 fig.
 - 1944a. Marine algae of the Monterey Peninsula. A review. *Ibid.*, 7(7):226-231.
 - 1945. Review of the Acrochaetium-Rhodochorton complex of the red algae. *Univ. Calif. Publ. Bot.*, 18(14):299-334.
- Sanborn, E. I. and M. S. Doty. 1946. The marine algae of the Coos Bay-Cape Arago Region. Oregon State Monographs. Studies in Botany (7): in press.
- Saunders, De A. 1901. The algae. Papers from the Harriman Alaska Exped. XXV. *Proceed. Wash. Acad. Sci.* 3:391-486. 20 pls.
- Schmidt, O. C. 1935. Pringsheimia Reinke jetzt Pringsheimiella v. Hoehn. *Hedwigia*, 74:29.
- Setchell, W. A. 1906. A revision of the genus Constantinea. *Nuova Notarisia*, 17:162-173.
 - 1912. Algae novae et minus cognitae. *Univ. Calif. Publ. Bot.*, 4:229-268. 7 pls.
 - 1914. Parasitic Florideae. I. Ibid., 6:1-34. 6 pls.
 - 1914a. The Scinaia assemblage. Ibid., 6:79-152. 7 pls.
 - 1923. Parasitic Florideae. II. Ibid., 10:393-396.
 - 1923a. A revision of the west North American species of Callophyllis. *Ibid.*, 10:397-401.
 - 1933. Some early algal confusions. II. Ibid., 17:187-254. 20 pls.
 - 1937. Report on the Sargassums. The Templeton Crocker Expedition of the California Acadamy of Sciences, 1932, no. 34. *Proc. Calif. Acad. Sci.* iv, 22(5): 127-158. 6 pls.
 - 1940. Fucus cordatus Turner. *Proceed. Nat. Acad. Sci. of U. S. A.*, 26(11):643-651. 2 figs.
- Setchell, W. A. and E. Y. Dawson. 1941. Binghamia, the alga, vs. Binghamia, the cactus. *Proc. Nat. Acad. Sci. of U. S. A.*, 27(8):376-381. 1 pl.
- Setchell, W. A. and N. L. Gardner. 1903. Algae of Northwestern America. *Univ. Calif. Publ. Bot.* 1:165-418. 21 pls.
 - 1920. The marine algae of the Pacific Coast of North America. Part 2, Chlorophyceae. *Ibid.*, 8:139-381. 25 pls.
 - 1924. The marine algae. Expedition of the California Academy of Sciences to the Gulf of California in 1921. *Proc. Calif. Acad. Sci.* iv, 12:695-949. 77 pls.
 - 1925. The marine algae of the Pacific Coast of North America, Part 3, Melanophyceae. *Univ. Calif. Publ. Bot.*, 8:383-898. 20 pls.
 - 1930. Marine algae of the Revillagigedo Islands Expedition of 1925. *Proc. Calif. Acad. Sci*, iv, 19:109-215. 15 pls.

- 1933. A preliminary survey of Gigartina, with special reference to its Pacific North American species. *Univ. Calif. Publ. Bot.*, 17:255-340. 20 pls.
- 1937. Iridophycus in the northern hemisphere. Proc. Nat. Acad, of Sci. of U. S. A., 23:169-174.
- 1937a. A preliminary report on the algae. The Templeton Crocker Expedition of the California Academy of Sciences. iv. 21:65-98. 1 fig. 23 pls.
- Setchell, W. A. and L. R. Mason. 1943. New or little-known crustose corallines of Pacific North America. *Proc. Nat. Acad. of Sci. of U. S. A.*, 29:92-97.
 - 1943a. Goniolithon and Neogoniolithon: two genera of crustaceous coralline algae. *Ibid.*, 29:87-92.
- Smith, G. M. 1944. Marine algae of the Monterey Peninsula, California. ix+622 pp., 98 pls. Stanford Univ.
- Taylor, W. R. 1939. Algae collected on the Presidential cruise of 1938. Smithsonian Contr. Knowl., Miscell. Ser. 98(9):1-18. 2 pls. 14 figs.
 - 1945. Pacific marine algae of the Allan Hancock Expeditions to the Galapagos Islands. *Allan Hancock Pac. Exped.* 12:1-528. 100 pls. 3 figs.
- Yendo, K. 1902. Corallinae verae of Port Renfew. Minnesota Bot. Stud. 2(40):711-720. 6 pls.
- Zeh, W. 1912. Neue Arten der Gattung Liagora. Berlin Notizbl. bot. Garten, 5(49):268-273.

INDEX

Synonyms are in italics

| PAGE | PAGE |
|-------------------|---------------------|
| Acetabularia | tenuifolia 42 |
| parvula 15 | f. typica |
| v. americana 15 | f. amplior 42 |
| Acrochaetium | valida 42 |
| Amphiroae 52 | f. longipes |
| angustum 52 | Amphiroa |
| Bornetii 52 | annulata 70 |
| coccineum 52 | compressa |
| Daviesii 52 | v. tenuis 70 |
| densum 52 | Crosslandii 70 |
| Desmarestiae 52 | dimorpha 70 |
| Dictyotae 52 | foliacea 71 |
| Eastwoodae 53 | fragilissima 71 |
| elegans 53 | franciscana 71 |
| Erythrophyllum 53 | mexicana 71 |
| Gymnogongri53 | minutissima 71 |
| Hancockii 53 | peninsularis71 |
| Macounii 53 | polymorpha |
| magnificum 53 | pusilla 71 |
| obscurum 53 | rigida 71 |
| pacificum 53 | zonata 71 |
| penetrale 53 | Amplisiphonia |
| plumosum 53 | pacifica112 |
| rhizoideum 53 | Anisocladella |
| v. patens 53 | pacifica104 |
| simplex 54 | Antithamnion |
| sinicolum 54 | alternans 94 |
| subimmersum 54 | asymmetricum 94 |
| tenuissimum 54 | Baylesiae 94 |
| Thurettii | defectum |
| v. agama54 | dendroideum 94 |
| vagum 54 | densiusculum 94 |
| variabile 54 | floccosum 94 |
| Acrosorium | Gardneri 94 |
| uncinatum105 | glanduliferum 94 |
| Aegira | Kylinii 94 |
| virescens 32 | nigricans 94 |
| Aeodes | occidentale 94 |
| Gardneri | pacificum |
| Agardhiella | pulchellum |
| Coulteri | pygmaeum |
| mexicana | secundatum 95 |
| tenera | setaceum 95 |
| cribrosum 40 | simulans 95 |
| fimbriatum | sublittorale 95 |
| Ahnfeltia | subulatum 95 |
| gigartinoides 84 | tenuissimum94 |
| plicata | uncinatum 95 |
| Alaria | Archeolithothamnium |
| dolichorhachis | Howei |
| fistulosa | Arthrothamnus |
| f. platyphylla 42 | bifidus41 |
| f. stenophylla | Asparagopsis |
| lanceolata | hamifera 58 |
| marginata | Sanfordiana 58 |
| nana | f. amplissima 58 |
| Pylaii | taxiformis 58 |
| # J = CLIE | |

| PAGE | PAGE |
|------------------------------------|----------------------------------|
| Asymmetria | regenerans 71 |
| expansa 63 | Schmittii |
| Audouinella | Setchelliae 72 |
| membranaceum 55 | Callithamnion acutum |
| Danaia | arborescens 96 |
| Bangia fuscopurpurea 50 | biseriatum 96 |
| maxima | bisporum 96 |
| tenuis 50 | breviramosum 96 |
| vermicularis 50 | byssoides 96 californicum 96 |
| Baylesia nlumosa 61 | californicum |
| plumosa 61 Besa | laxum |
| papillaeformis 89 | pacificum 96 |
| Binghamiella | Pikeanum |
| californica92 | v. pacificum |
| Forkii 92 | rupicolum 97 |
| Blossevillea Brandegeei47 | soccoriense |
| Bonnemaisonia | squarrulosum 97 |
| californica 57 | veleroae 97 |
| geniculata 57 | Callocolax fungiformis |
| hamifera 58 | globulosis |
| Boodlea composita 15 | neglectus |
| Bossea | Callophyllis |
| angustata 69 | acrocarpa |
| californica | crassifolia |
| corymbifera | dissecta 76 |
| dichotoma | edentata |
| Gardneri | filicina 77 |
| interrupta 70 | flabellulata |
| Orbigniana | Gardneri 77 heanophylla 77 |
| pachyclada | heanophylla |
| plumosa | marginifructa 77 |
| Calliptera116 | megalocarpa 77 |
| radicans116 | obtusifolia 77 |
| tenella116 | odonthalioides |
| Botryocladia Hancockii | plumosa |
| Hancockii 90 pseudodichotoma 90 | stenophylla |
| v. datilensis 90 | Thompsonii |
| uvarioides 90 | violacea |
| Botryoglossum | Caulerpa peltata 17 |
| Farlowianum | pinnata |
| Woodii102 | f. pectinata |
| Brogniartella | racemosa |
| mucronata111 | v. chemnitzia 17 |
| Bryocladia | v. clavifera f. macrophysa 17 |
| dictyurus110 | racemosa |
| Bryopsis corticulans 16 | v. laeteirens |
| galapagensis | f. cylindraceae 18 |
| hypnoides 16 | f. typica |
| pennatula | v. occidentalis |
| plumosa 16 | v. uvifera |
| v. pennata | Vanbosseae |
| pacificum116 | Centroceras |
| Bulbocoleon | bellum |
| piliferem 4 | clavulatum101 |
| 6 111 41 | Ceramium |
| Calliarthron cheilosporioides | affine 99 californicum 99 |
| pinnulatum | Camouii |
| pimulatum | |

| PAGE | PAGE |
|--|----------------------------------|
| Ceramium | Chondus |
| caudatum 99 | crispus 85 |
| clarionensis | Chorda |
| codicola 99 | Filum 39 |
| codiophila 99 | Chordaria |
| Eatonianum | dissessa |
| Evermannii | flagelliformis |
| fastigiatum | gracilis 33 |
| fimbriatum 99 | Choreocolax Polygiphonica |
| Gardneri100 | Polysiphoniae |
| $\operatorname{gracillimum} \ldots 100$ | Thureti |
| horridum100 | Chromastrum |
| ornatum100 | arcuatum 54 |
| pacificum100 | hirsutum 54 |
| paniculatum | implicatum 54 |
| procumbens100 | microscopicum 54 |
| rubrum100 | moniliforme |
| serpens100 | Porphyrae 55 Cladophora |
| sinicola100 | albida 12 |
| v. interruptum100 | amphibia 12 |
| v. Johnstonii101 | Bertolonii |
| strictum | v. hamosa 12 |
| washingtoniense | delicatula 12 |
| zebrinum | flexuosa 12 |
| Chaetomorpha | glaucescens |
| aerea | gracilis 12 |
| antennina 11 | f. expansa |
| californica 11 | hemisphaerica 12 |
| cannabina 11 | hesperia |
| clavata | Hutchinsiae |
| crassa | v, distans 13 |
| melangonium 12 tenuissima 12 | laetevirens 13 |
| torta 12 | MacDougalii |
| Champia | microcladioides |
| caespitosa 93 | 1. stricta |
| disticha 93 | panamensis |
| parvula 93 | prolifera 13 |
| Chlanidophora | Rudolphiana 13 |
| abyssicola | f. eramosa 13 |
| Chlorochytrium | Stimpsonii |
| inclusum | tiburonensis |
| Porphyrae | trichotoma |
| Chlorodesmis | Cladophoropsis |
| comosa | robusta 15 |
| mexicana | Clarionea |
| Chnoospora | Masonii 78 |
| pacifica 38 | Clathromorphum |
| pannosa 38 | compactum |
| Chondria | f. eircumscriptum 65 Codiolum |
| acrorhizophora113 | gregarium 16 |
| arcuata113 | Petrocelidis |
| californica113 | pusillum |
| clarionensis113 | f. subsessile 16 |
| cuscutoides113 | Codium |
| dasyphylla113 | amplivesiculatum 18 |
| decipiens | anastomosans |
| nidifica113 oppositiclada113 | conjunctum 18 |
| pacifica113 | cuneatum |
| platyclada113 | fernandezianum |
| secundata113 | fragile |
| telmoensis113 | isabelae |
| | , |

| PAGE | PAGE |
|---|------------------------------|
| Codium | Cruoriella |
| longiramosum | Dubyi 63 |
| Macdougalii | Cryptonemia borealis |
| Palmeri 19 Setchellii 19 | decolorata |
| simulans | obovata |
| Ritteri 19 | ovalifolia 73 |
| Coeloseira | Cryptopleura |
| compressa | brevis |
| parva 93 | corallinara |
| Coilodesme bulligera 37 | dichotoma106 |
| bulligera | lobulifera106 |
| corrugata 37 | Ruprechtiana106 |
| Cystoseirae 37 | spatulata106 |
| polygnampta | violacea |
| rigida 38 sitchensis 38 | Woodii |
| Collinsiella | Cumagloia |
| tuberculata 3 | Andersonii 56 |
| Colpomenia | Cutleria Hancockii 27 |
| ramosa 37 | Cyamathere |
| sinuosa | triplicata 40 |
| f. expansa | Cystophyllum |
| f. tuberculata 37 | geminatum 47 |
| Compsonema | Cystoseira neglecta 47 |
| coniferum 31 dubium 31 | neglecta 47 osmundacea 47 |
| dubium 31 fasciculatum 31 | Setchellii |
| fructuosum | |
| immixtum 31 | Dasya |
| intricatum 32 | californica |
| myrionematoides | pedicellata106 |
| pusillum 32 | Stanfordiana107 |
| ramulosum 32 | Dasyopsis |
| secundum 32 | densa107 |
| serpens | plumosa107 Delesseria |
| sessile 32 speciosum | decipiens103 |
| f. piliferum 32 | Derbesia |
| sporangiiferum 32 | Lamourouxii |
| streblonematoides 32 | marina |
| tenue 32 Conchocelis | pacifica |
| rosea 55 | Dermatolithon |
| Constantinea | saxicolum |
| rosa marina | veleroae 66 |
| simplex | Dermocorynus occidentalis 72 |
| subulifera 62 Corallina | Desmarestia |
| chilensis 68 | farcta 33 |
| cubensis 68 | filamentosa 34 |
| gracilis | foliacea |
| v. densa 68 v. lycopodioides 69 | herbacea |
| v. lycopodioides 69 officinalis | Jordanii |
| f. pilulifera 69 | latifrons 34 |
| pilulifera 69 | latissima |
| subulata | ligulata 34 |
| vancouverieusis 69 Corallopsis | linearis |
| salicornia 81 | v. tenuis |
| Costaria | mexicana 34 |
| costata 40 | munda 34 |
| Crouania 87 | pacifica |
| attenuata | VITIUIS |

| PAGE | PA | \GE |
|----------------------|-------------------------|---|
| Dicranema | Hancockii | 22 |
| rosaliae 83 | hemisphericus | 22 |
| Dictyoneuropsis | f. minor | |
| reticulata | | |
| californicum 41 | luteolus | $\frac{22}{23}$ |
| Dictyopteris | Mitchellae | 23 |
| delicatula 28 | mucronatus | $\frac{23}{23}$ |
| Johnstonei 29 | oviger | 23 |
| zonarioides | Parksii | 23 |
| foeniculaceus | Saundersiisiliculosus | $\frac{23}{23}$ |
| hippuroides 38 | | $\frac{23}{23}$ |
| hispidus 39 | simulans | 23 |
| sinicola 39 | socialis | 23 |
| tenuis | | 23 |
| australis | | $\begin{array}{c} 23 \\ 23 \end{array}$ |
| Versluysi | 1 · | $\frac{23}{24}$ |
| Dictyota | variabilis | $\frac{24}{24}$ |
| Binghamiae | Egregia | |
| concrescens | | 43 |
| crenulata | | 43 |
| divaricata 28 | Eisenia arborea | 40 |
| flabellata | | $\frac{42}{43}$ |
| hesperia 28 | 3.5 | 43 |
| Johnstonii | Elachistea | |
| Masonii | fucicola | |
| Digenia | | 26 |
| simplex116 | Endarachne Binghamiae | 9.0 |
| Dilsea | Endocladia | 30 |
| californica | _ | 62 |
| filiformis | Endophyton | • |
| Dunaliella | ramosum | 5 |
| salina 3 | Enteromorpha | |
| | acanthophora | 7 |
| Ectocarpus | clathratacrinita | 7 |
| acuminatus | compressa | $\frac{1}{7}$ |
| , affinis 20 | erecta | 7 |
| breviarticulatus 20 | flexuosa | 7 |
| Bryantii | groenlandica | $\frac{7}{7}$ |
| chantransioides | intestinalis f. clavata | 7 8 |
| chitonicola | f. cylindracea | 7 |
| confervoides | f. maxima | 7 |
| f. parvus 21 | lingulata | 8 |
| f. pygmaeus 21 | marginata | 8 |
| f. typicus | micrococcaf. subsalsa | 8 8 |
| f. <i>variabilis</i> | minima | 8 |
| cylindricus | plumosa | Š |
| f. codiophilus 21 | prolifera | 8 |
| Duchassaingianus 21 | salina | |
| ellipticus 21 | v. polyclados | 8 |
| ensenadanus | torta | 8 |
| flagelliferus | tubulosa | 8 |
| flocculiformis | Entocladia | 1 |
| fructuosus 22 | cingenscodicola | 4 |
| globifer | condensata | 4 |
| gonodioides | mexicana | 5 |
| v. pygmaeus | Polysiphoniae | 5 |
| granulosus | viridis | 5 |
| | | - |

| PAGE | $\mathbf{P}\mathbf{A}\mathbf{G}\mathbf{E}$ |
|---|--|
| | f. flabellatus 44 |
| Erythrocladia irregularis 50 | f. longifructus 44 |
| subintegra | f. macrocephalus 44 |
| Erythroglossum | f. magnificus 44 |
| californicum103 | f. marginatus 44 |
| divaricata | f. nanus 44 |
| intermedium103 | 1. Oregonicasis |
| Erythropeltis discigera 49 | f. pergrandis |
| Erythrophyllum | f. rudis 44 |
| delesserioides 89 | f. stellatus 44 |
| Erythrotrichia | f. typicus 45 |
| californica 49 | furcatus |
| carnea 49 | f. abbreviatus |
| ceramicola | f. angustus |
| Kylinii 49 Parksii 49 | f. cornutus |
| v. minor 49 | f. elongatus |
| polymorpha | f. latifrons 45 |
| porphyroides 50 | f. linearis |
| pulvinata 50 | f. luxurians 45 |
| tetraseriata50 | f. nigricans |
| Welwitschii 50 | f. rigidus |
| Estebania conjuncta 73 | f. typicus |
| Eucheuma | f. variabilis 46 |
| uncinatum 79 | membranaceus |
| Euthora | f. abbreviatus |
| cristata 81 | f. acuminatus |
| fruticulosa 81 | f. latissimus |
| En Uranhangia | f. obtusus 46 |
| Falkenbergia Hillebrandtii111 | f. typicus |
| Farlowia | nitens 46 |
| compressa 61 | Parksii 46 |
| crassa 61 | |
| mollis 61 | Galaxaura fastigiata 57 |
| Fauchea crispa 89 | filamentosa 57 |
| crispa | marginata 57 |
| laciniata | oblongata $\dots 57$ |
| $media \dots 90$ | ramulosa 57 |
| mollis 90 | squalida 57 |
| pygmaea 90 Sefferi 90 | stupocaulon 57 subfruticulosa 57 |
| Sefferi 90 Faucheocolax | ventricosa 57 |
| attenuata 90 | veprecula 57 |
| Fosliella | Gardneriella |
| ascripticia | tubifera 79 |
| dispar | Gastroclonium clavatum 93 |
| intermedia | Coulteri 93 |
| minuta | Gayella |
| paschalis | constricta 10 |
| Fryella | polyrhiza 10 |
| Gardneri 90 | Gelidiella |
| Fucus | acerosa 60 |
| edentatus 43 | Hancockii 60 mexicana 60 |
| f. acutus | refugiensis |
| f. divaricatus 43 | Gelidiocolax |
| f. divergens 43 | microsphaerica 60 |
| f. hesperius 43 | Gelidiopsis |
| evanescens | tenuis |
| f. cornutus 43 | variabilis 60 Gelidium |
| f. cuneatus | arborescens 58 |
| f. ecostatus | caloglossoides |
| 1. 000×00000 | Contract Con |

| PAGE | PAGE |
|---------------------------------|---|
| Gelidium | cornu-cervi 49 |
| cartilagineum 58 | elegans 49 |
| v. robustum 58 | Gonodia |
| Coulteri 58 | Johnstonii |
| crinale 58 v. luxurians 58 | Marchantae |
| v. luxurians 58 decompositum 58 | Gracilaria |
| densum | Andersonii 81 cerrosiana 81 |
| Johnstonii 59 | cerrosiana 81 compressa 81 |
| microphysa 59 | confervoides |
| nudifrons 59 | crispata 82 |
| polystichum 59 | guaymasensis |
| pulchrum 59 | Hancockii 82 |
| purpurascens 59 | Johnstonii 82 |
| pusillum 59 ramuliferum 59 | lacerata 82 |
| sclerophyllum | lichenoides 82 |
| Setchellii | linearis |
| sinicola | panamensis |
| Gigartina | pinnata 82 |
| Agardhii 85 | robusta 82 |
| armata 85 | Sjoestedtii 83 |
| asperifolia | subsecundata 83 |
| Binghamiae | tenuifolia |
| Boryi 85 californica 85 | veleroae |
| canaliculata | Vivesii |
| corymbifera 85 | Gracilariophila Gardneri |
| cristata 85 | Gardneri |
| dichotoma 86 | Grateloupia |
| Eatoniana 86 | abreviata |
| echinata | acroidalea 72 |
| exasperata 86 | californica 72 |
| Harveyana 86 Jardinii 86 | cerrosiana 72 |
| Johnstonii | filicina 72 |
| latissima 86 | Hancockii |
| leptorhynchos 86 | Howeii |
| Macdougalii 86 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ |
| mamillosa | pinnata 73 |
| multidichotoma | prolongata |
| obovata | Setchellii 73 |
| pectinata | squarrulosa 73 |
| serrata | Griffithsia |
| sitchensis 87 | multiramosa 98 |
| spinosa 87 | v. balboensis |
| stellata 87 | v. minor |
| tepida 87 | Schoesboei |
| Turneri | tenuis 98 |
| Gloiopeltis | Grinnellia |
| furcata 62 | lanceolata104 |
| miniata | Gymnogongrus |
| Gloiophloea | carnosus 84 |
| confusa 56 | divaricatus 84 |
| Gloiosiphonia | Hancockii |
| californica | leptophyllus 84 linearis 84 |
| capillaris | martinensis |
| verticillaris | norvegicus |
| polyrhiza 6 | platyphyllus |
| Gonimophyllum | sinicola |
| Skottsbergii | Gymnothamnion |
| Goniotrichopsis | elegans 97 |
| sublittoralis 49 | |
| Goniotrichum | Halicystis |
| <i>Alsidii</i> 49 | ovalis 16 |

| Halidrys | PAGE | PAGE |
|--|---|--|
| Halimeda Hormiscia discoidea 19 dolitiera 11 opuntia 19 grandis 11 tuna 19 penicilifiromis 11 tuna 19 penicilifiromis 11 thaloplegma 11 thaloplegma 12 theraciliata 11 thaloplegma 13 theraciliata 11 thaloplegma 14 theraciliata 11 thaloplegma 11 theraciliata 12 theraciliata 13 theraciliata 13 theraciliata 13 theraciliata 13 theraciliata 14 theraciliata 15 theraciliata 15 theraciliata 16 theraciliata 17 theraciliata 17 | Halidrys | Holmesia |
| dolifera | | |
| opuntia 19 grandis 11 tuna 19 penicilliformis 11 Haloplegma 97 tetraciliata 11 mexicanum 97 tetraciliata 11 Halorhipis 35 Wormskioldii 11 Winstonii 35 Wormskioldii 11 Halosaccion Hydrocilathrus 37 glandiforme 96 clathratus 37 ramentaceum 91 Hydrolithon 37 Halothrix Hymenena 65 Halothrix Hymenena 105 Halymenia Kylini 105 abyssicola 74 multiloba 105 Agardhii 74 Setchellii 105 Agardhii 74 Smithi 105 Aparonica 74 Hymenena 80 Haplosposigion californica 80 Haplosposigion californica 80 Haplosposia Adesconii 30 | | doliifera 11 |
| tuna 19 peniciliformis 11 Haloplema 97 tetraciliata 11 Mornskiedii 11 Winstonii 35 vancouveriana 11 Winstonii 35 Wormskiedii 11 Halorhipis 26 clathratus 37 ramentaceum 91 Hydroelathrus 37 ramentaceum 191 Hydroelathrus 37 ramentaceum 39 ramentaceum 30 ramentaceum 31 ramentaceum 31 ramentaceum 3 | opuntia 19 | grandis 11 |
| mexicanum 97 tétraciliata 11 Halorhipis vancouveriana 11 Winstonii 35 Wormskioldii 11 Halorhipis 96 clathratus 37 ramentaceum 91 Hydrolithon 37 Tilesi 91 Hydrolithon 65 Halothrix Hymenena 105 Humbricalis 26 Hymenena 105 Allymenia Kylini 105 Actinophysa 74 Setchellii 105 Agardhii 74 Smithii 105 Agardhii 74 Smithii 105 Agardhii 74 Smithii 105 Agardhii 74 Smithii 105 Apardhii 74 Smithii 105 Apardhii 24 Hymea 80 Haplospongidion Esperi 80 Rapiospongidion Esperi 80 Kukuekli 33 Johnstonii 80 </td <td>tuna 19</td> <td></td> | tuna 19 | |
| Halorhipis Wancouveriana 11 Winstonii 35 Wormskioldii 11 Halosaccion glandiforme 96 clathratus 37 ramentaceum 91 Hydroclathrus 37 Tilesii 91 Setchellii 65 Halothrix 105 Maltinon 105 Halothrix 106 Maltinon 105 Algarenia 74 Setchellii 105 Agardhii 74 Setchellii 105 Agardhii 74 Setchellii 105 Agardhii 74 Smithii 105 Agardhii 74 Smithii 105 Agardhii 74 Hypnea 80 Alpalospongidion Californica 80 Haplaospongidion Severmanii 80 Andersonii 32 Johnstonii 80 Hedophyllum spinella 80 subsessile 41 Hypoglossum Helminthocladia californica 55 gracilis 55 Stricta 55 Stricta 55 Stricta 55 Eleminthora Saundersii 55 Helminthora Saundersii 55 Stricta 55 Stricta 55 Herposiphonia grandis 112 rigida 112 f. typica 36 f. caespitosa 36 f. | Haloplegma | sphaerulliera 11 |
| Winstoni | | |
| Sandiforme 96 | Winstonii 35 | Wormskioldii 11 |
| Tamentaceum | | Hydroclathrus |
| Tilesi | glandiforme 96 | |
| Halothrix Hymenena 105 | | Setchellii 65 |
| Halymenia Aysisiola 14 Multiloba 105 actinophysa 74 Setchellii 105 Agardhii 74 Smithii 105 Californica 74 Hypnea Tefugiensis 74 adunca 80 Mapalospongidion californica 80 Evermanii 80 Andersonii 33 Johnstonii 80 Andersonii 30 Andersonii | Halothrix | Hymenena |
| abyssicola 74 multiloba 105 actinophysa 74 Setchellii 105 Agardhii 74 Smithii 105 Agardhii 74 Smithii 105 refugiensis 74 adunca 80 Haplospongidion 26 Esperi 80 Haplogloia Evermanii 80 Andersonii 33 Johnstonii 80 Kuckuckii 33 nidifica 80 Hapterophycus nidulans 80 canaliculatus 26 pannosa 80 Hedophyllum spinella 80 subsessile 41 Hypoglossum subsessile 41 Hypoglossum Helminthocladia 5 attenuatum 102 gracilis 55 retusum 102 Helminthora 5 Ilea Fascia 36 Herposiphonia 6 f. caespitosa 36 grandis 112 | | |
| Agardhii | | multiloba |
| Agardhii 74 Smithi 10c californica 74 Hyppnea 80 refugiensis 74 adunca 80 Haplospongidion californica 8c gelatinosum 26 Esperi 80 Haplogloia Evermanii 80 Andersonii 33 Johnstonii 80 Kuckuckii 33 nidifica 80 Hapterophycus nidulans 80 canaliculatus 26 pannosa 80 canaliculatus 26 pannosa 80 Hedophyllum spinella 80 sessile 41 Hypoglossum 102 sessile 41 Hypoglossum 102 californica 55 retusum 102 dalitornica 55 retusum 102 dalitornica 55 retusum 102 Helminthora 112 f. debilis 36 stricta 55 f. | | Setchellii |
| Tefugiensis 74 | Agardhii 74 | |
| Hapalospongidion gelatinosum 26 | Cultiparation Color Color Color Color | |
| Separt S | | |
| Andersonii 33 | gelatinosum 26 | Esperi 80 |
| Ruckuckii 33 nidifica 80 | Haplogloia | |
| Hapterophycus | | JOHNSCOHII |
| canaliculatus 26 pannosa 80 Hedophyllum spinella 80 sessile 41 variabilis 80 subsessile 41 Hypoglossum 102 delminthocladia 55 attenuatum 102 gracilis 55 retusum 102 Helminthora Saundersii 55 Fascia 36 Saricta 55 f. caespitosa 36 Herposiphonia 112 f. caespitosa 36 grandis 112 f. typica 36 grandis 112 f. typica 36 grandis 112 f. typica 36 grandis 112 f. caespitosa 36 grandis 112 f. debilis 36 paymaea 112 f. typica 36 ridea 112 f. typica 36 ridea 112 f. typica 36 ridea 112 f. typica 36 | Hapterophycus | nidulans 80 |
| sessile 41 variabilis 80 subsessile 41 Hypoglossum 102 dalifornica 55 attenuatum 102 gracilis 55 retusum 102 Helminthora 102 attenuatum 102 Helminthora 15 Fascia 36 Saundersii 55 Fascia 36 Herposiphonia 112 f. debiils 36 grandis 112 f. debiils 36 grava 112 f. typica 36 paygmaea 112 f. zosterifolia 36 prigida 112 f. zosterifolia 36 rigida 112 Freyeana 5 Internoretia Freyeana 5 Iridea 2 californica 88 Iridophycus 11 californica 88 Hesperophycus 4 californica 88 Heterochordaria 4 flaccidum 88 | canaliculatus 26 | permose filtri |
| Subsessile | Hedophyllum | spinella |
| Helminthocladia | subsessile | Hypoglossum |
| Helminthora Saundersii 55 | | abyssicolum102 |
| Helminthora | | attenuatum102 |
| Saundersii 55 Ilea stricta 55 Fascia 36 Herposiphonia f. caespitosa 36 grandis 112 f. debilis 36 parva 112 f. typica 36 pygmaea 112 f. zosterifolia 36 rigida 112 f. zosterifolia 36 v. laxa 112 f. zosterifolia 36 secunda 112 f. zosterifolia 36 secunda 112 f. zosterifolia 36 Internoretia Freyeana 5 Freyeana 5 5 ridea 112 ridea subdisticha 112 ridea subdisticha 112 ridea tenella 112 ridea tenella 112 rodatum 88 Hesperophycus 47 flaccidum 88 Heterochordaria flaccidum 38 abitine 66 parksii | | retusum |
| stricta 55 Fascia 36 Herposiphonia f. caespitosa 36 grandis 112 f. debilis 36 parva 112 f. typica 36 pygmaea 112 f. zosterifolia 36 rigida 112 Freyeana 5 v. laxa 112 Freyeana 5 secunda 112 Freyeana 5 secunda 112 Freyeana 5 secunda 112 Freyeana 5 Internoretia Freyeana 5 Iridea 2 californica 88 Iridea 2 californica 88 Iridea 2 californica 88 B Leverticillata 112 californica 88 Hesperophycus 47 Galfornica 88 Heterocharia flaccidum 88 Heteroderma flaccidum 88 Gibbsii 66 lin | | |
| Refposipionia 112 f. debilis 36 grandis 112 f. typica 36 grandis 36 parva 112 f. zosterifolia 36 pygmaea 112 f. zosterifolia 36 f. zosterifolia | Summer sin the second second | Fascia 36 |
| grandis 112 f. typica 36 pygmaea 112 f. zosterifolia 36 rigida 112 f. zosterifolia 36 v. laxa 112 Freyeana 5 secunda 112 Freyeana 5 secunda 112 Iridea 88 subdisticha 112 californica 88 tenella 112 californica 88 tenella 112 cordatum 88 Hesperophycus coriaceum 88 Harveyanus 47 flaccidum 88 Heterochordaria fulgens 88 abietina 33 furcatum 88 Heteroderma heterocarpum 88 Gibbsii 66 Parksii 88 Heteronema parvulum 88 heterocapu sanguineum 89 asymmetria 107 splendens 89 erecta 107 whidbeyanum 8 | Herposiphonia | |
| Parva | grandis112 | f. typica 36 |
| rigida 112 Internoenta 5 v. laxa 112 Freyeana 5 secunda 112 Iridea 88 subdisticha 112 californica 88 tenella 112 californicum 88 verticillata 112 cordatum 88 Hesperophycus cordatum 88 Harveyanus 47 flaccidum 88 Heterochordaria fulgens 88 abietina 33 furcatum 88 Heteroderma heterocarpum 88 Gibbsii 66 Parksii 88 Heteronema parvulum 88 heterosiphonia sanguineum 89 asymmetria 107 sinicola 89 densiuscula 107 splendens 89 erecta 107 splendens 89 sinicola 107 shideyanum 89 laxa 107 shideo 38 Hildenbrandia occidentalis 63 Janczewskia < | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | f. zosterifolia 36 |
| v. laxa 112 Iridea 88 subdisticha 112 californica 88 tenella 112 tridophycus 1ridophycus verticillata 112 californica 88 Hesperophycus cordatum 88 Harveyanus 47 flaccidum 88 Heterochordaria fulgens 88 abietina 33 furcatum 88 Heteroderma heterocarpum 88 Gibbsii 66 Parksii 88 Heteronema parvulum 88 heterosiphonia sanguineum 89 asymmetria 107 sinicola 89 erecta 107 whidbeyanum 89 laxa 107 shige 38 Hildenbrandia occidentalis 63 Janczewskia 5 prototypus 63 Gardneri 115 | rigida112 | |
| seculda 112 californica 88 subdisticha 112 tridophycus 88 tenella 112 californicum 88 verticillata 112 californicum 88 Hesperophycus cordatum 88 Harveyanus 47 flaccidum 88 Heterochordaria fulgens 88 abietina 33 furcatum 88 Heteroderma heterocarpum 88 Gibbsii 66 Parksii 88 Heteronema parvulum 88 heterosiphonia sanguineum 89 asymmetria 107 splendens 89 erecta 107 whidbeyanum 89 laxa 107 shige foliacea 38 Hildenbrandia occidentalis 63 Janczewskia prototypus 63 Gardneri 115 | | |
| tenella 112 rittophycus verticillata 112 californicum 88 Hesperophycus coriaceum 88 Harveyanus 47 fiaccidum 88 Heterochordaria fulgens 88 abietina 33 furcatum 88 Heteroderma heterocarpum 88 Corallinicola 66 lineare 88 Gibbsii 66 Parksii 88 Heteronema parvulum 88 borealc 104 Reediae 89 Heterosiphonia sanguineum 89 asymmetria 107 sinicola 89 erecta 107 whidbeyanum 89 laxa 107 shige 38 Hildenbrandia occidentalis 63 Janczewskia prototypus 63 Gardneri 115 | | californica |
| Hesperophycus | | Iridophycus |
| Hesperophycus 47 coriaceum 88 Heterochordaria flaccidum 88 abietina 33 furcatum 88 Heteroderma heterocarpum 88 Coriaceum 68 fulgens 88 Heteroderma heterocarpum 88 Gibbsii 66 Parksii 88 Heteronema parvulum 88 boreale 104 Reediae 89 Heterosiphonia sanguineum 89 asymmetria 107 sinicola 89 erecta 107 whidbeyanum 89 laxa 107 shige sinicola 107 foliacea 38 Hildenbrandia occidentalis 63 Janczewskia prototypus 63 Gardneri 115 | | |
| Heterochordaria fulgens 88 abietina 33 furcatum 88 Heteroderma heterocarpum 88 Corallinicola 66 lineare 88 Gibbsii 66 Parksii 88 Heteronema parvulum 88 boreale 104 Reediae 89 Heterosiphonia sanguineum 89 asymmetria 107 sinicola 89 erecta 107 whidbeyanum 89 laxa 107 whidbeyanum 89 sinicola 107 foliacea 38 Hildenbrandia occidentalis 63 Janczewskia prototypus 63 Gardneri 115 | Hesperophycus | coriaceum 88 |
| abietina 33 furcatum 88 Heteroderma 66 heterocarpum 88 Gibbsii 66 Parksii 88 Heteronema parvulum 88 boreale 104 Reediae 89 Heterosiphonia sanguineum 89 asymmetria 107 sinicola 89 erecta 107 splendens 89 erecta 107 whidbeyanum 89 laxa 107 shige 38 Hildenbrandia 63 Janczewskia 38 prototypus 63 Gardneri 115 | • | Trace of a carrier of the carrier of |
| Heteroderma 66 heterocarpum 88 Gibbsii 66 lineare 88 Heteronema parvulum 88 boreale 104 Reediae 89 Heterosiphonia sanguineum 89 asymmetria 107 sinicola 89 erecta 107 splendens 89 erecta 107 whidbeyanum 89 laxa 107 shige 38 Hildenbrandia 63 Janczewskia 38 prototypus 63 Gardneri 115 | | zuigotio i i i i i i i i i i i i i i i i i i |
| corallinicola 66 lineare 88 Gibbsii 66 Parksii 88 Heteronema parvulum 88 boreale 104 Reediae 89 Heterosiphonia sanguineum 89 asymmetria 107 sinicola 89 densiuscula 107 splendens 89 erecta 107 whidbeyanum 89 laxa 107 Ishige 38 Hildenbrandia 63 Janczewskia 38 prototypus 63 Gardneri 115 | Heteroderma | Lui ca cam |
| Heteronema parvulum 88 boreale 104 Reediae 89 Heterosiphonia sanguineum 89 asymmetria 107 sinicola 89 densiuscula 107 splendens 89 erecta 107 whidbeyanum 89 laxa 107 Ishige 38 Hildenbrandia foliacea 38 Hildenbrandia 63 Janczewskia prototypus 63 Gardneri 115 | COLUMNIZATORIA COLCUMNIZATION OF | lineare 88 |
| boreale 104 Reediae 89 Heterosiphonia sanguineum 89 asymmetria 107 sinicola 89 densiuscula 107 splendens 89 erecta 107 whidbeyanum 89 laxa 107 Ishige sinicola 107 foliacea 38 Hildenbrandia 63 Janczewskia prototypus 63 Gardneri 115 | | 1 dringer in the contract of t |
| Heterosiphonia sanguineum 89 asymmetria 107 sinicola 89 densiuscula 107 splendens 89 erecta 107 whidbeyanum 89 laxa 107 Ishige 38 Hildenbrandia foliacea 38 hildenbrandia 63 Janczewskia prototypus 63 Gardneri 115 | | |
| densiuscula .107 splendens .89 erecta .107 whidbeyanum .89 laxa .107 Ishige sinicola .107 foliacea .38 Hildenbrandia occidentalis prototypus | | sanguineum |
| erecta .107 whidbeyanum 89 laxa .107 Ishige sinicola .107 foliacea 38 Hildenbrandia .63 Janczewskia prototypus .63 Gardneri .115 | asymmetria | |
| laxa | | whidbevanum |
| sinicola | laxa107 | Ishige |
| occidentalis | | foliacea 38 |
| prototypus | | Janczewskia |
| rosea | | Gardneri115 |
| | | lappacea115 |

| PAGE | PAGE |
|----------------------------------|--|
| Janczewskia | Leathesia |
| moriformis115 | difformis 30 |
| Solmsii115 Jania | nana 30 |
| adhaerens | Leptocladia Binghamiae 61 |
| capillacea 70 | conferta |
| mexicana 70 | laxa |
| rubens 70 | Leptofauchea |
| Jantinella | pacifica 90 |
| sinicola112 verrucaeformis112 | Lessoniopsis |
| Joculator | littoralis 41 |
| pinnatifolius | Liagora californica 56 |
| | ceranoides 56 |
| Kallymenia | valida 56 |
| angustata 75 | Lithoderma |
| guaymasensis 75 | fatiscens |
| oblongifructa 75 | Litholepis |
| ornata 75 | accola |
| pertusa | sonorensis |
| reniformis | Lithophyllum |
| f. cuneata | bracchiatum 67 |
| tenuifolia | coibense 67 |
| VOICE GROW | decipiens |
| Laminaria | Digueti 67 divaricatum 67 |
| Andersonii | elegans |
| complanata 39 | fetum 67 |
| cuneifolia 39 | grumosum |
| f. amplissima | Hancockii |
| f. angusta | lithophylloides |
| dentigera 39 | lividum 68 |
| ephemera 40 | Margaritae 68 |
| Farlowii 40 | muricatum |
| longipes | neofarlowii |
| personata | proboscidum |
| saccharina 40 | propinquum |
| f. linearis 40 | v. cocosica 68 |
| f. membranacea | trichotomum |
| Sinclairii | veleroae 68 whidbeyense 68 |
| clarionensis113 | Lithoporella |
| crispa114 | pacifica |
| diegoensis114 | Lithothamnium |
| estebaniana114 | aculeiferum 64 |
| Gardneri114 Hancockii114 | australe f. americana |
| humilis114 | f. minutula |
| intricata114 | f. tualensis 64 |
| Johnstonii114 | californicum |
| Masonii114 | conchatum |
| obtusiuscula114 pacifica114 | crassiusculum |
| paniculata114 | indicum |
| papillosa | lamellatum |
| v. pacifica114 | montereyicum |
| peninsularis115 | muricatum |
| scrippsensis115 sinicola115 | pacificum |
| Snyderae | phymatodeum |
| spectabilis115 | reclinatum |
| s plendens115 | validum 65 |
| subopposita115 | Lithothrix |
| voragina115 | aspergillum 69 |

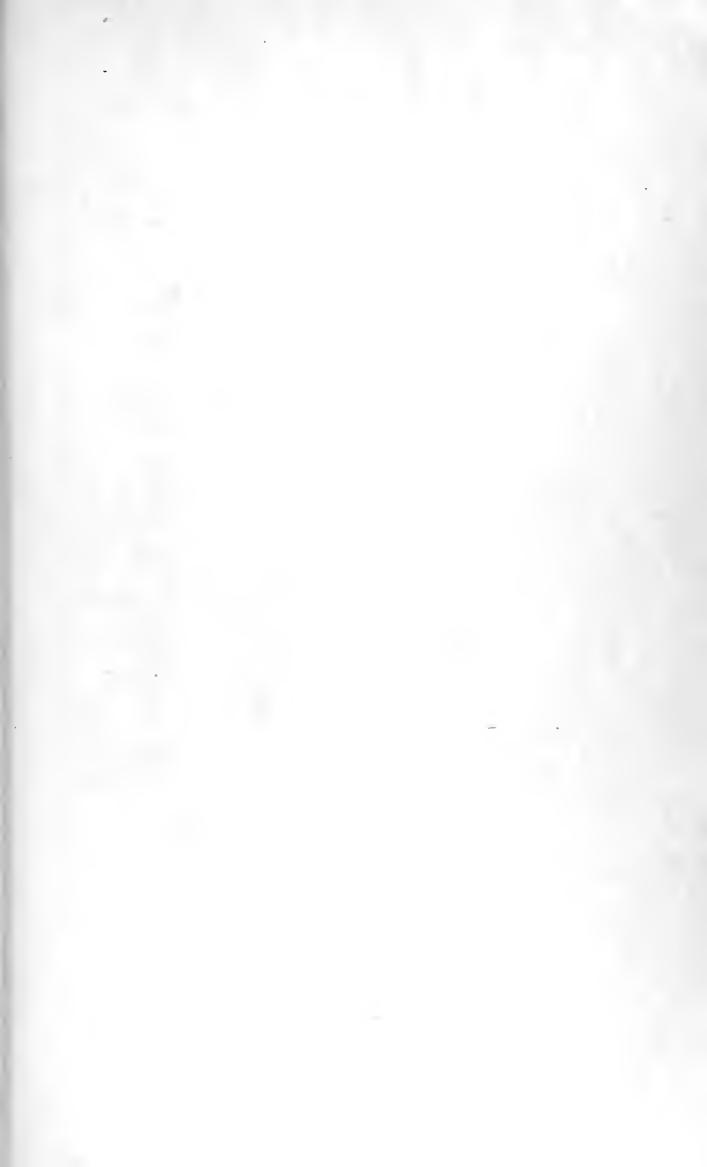
| PAGE | PAGE |
|--------------------------------|--------------------------|
| Lobocolax | balticum |
| deformans | f. californicum |
| Lola | compsonematoides 30 |
| lubrica 10 | corunnae |
| Lomentaria Baileyana 92 | f. angulatum 30 |
| Caseae 92 | f. sterile |
| catenata 93 | foecundum |
| Drouetii 93 hakodatensis 93 | f. ramulosum |
| Lophosiphonia | f. simplicissimum 31 |
| mexicana110 | f. subulatum 31 |
| obscura110 | globosum f. affine 31 |
| villum110 | minutissimum 31 |
| Macrocystis | obscurum 31 |
| integrifolia 41 | phyllophyllum |
| pyrifera 41 | primarium |
| Masonophycus | strangulans 31 |
| paradoxa 27 | |
| Melobesia marginata 64 | Nemacystus |
| mediocris64 | Brandegeei 33 |
| Membranoptera | Nemalion elminthoides 55 |
| denticulata102 | lubricum |
| dimorpha | virens 55 |
| platyphylla103 | Neogoniolithon |
| Setchellii | trichotomum |
| tenuis | Neomeris Vanbosseae |
| Weeksiae103 | Nereocystis |
| Meredithia californica | Luetkeana 41 |
| Mesophyllum | Neurocarpus delicatula |
| australe | zonarioides |
| v. menutula 64 | Nienburgia |
| v. tualensis 64 Microcladia | Andersoniana104 |
| borealis101 | borealis104 |
| californica101 | Nitophyllum mirabile105 |
| Coulteri101 | |
| Microdictyon Palmeri | Odonthalia |
| Monostroma | dentata116 |
| areolatum 6 | floccosa |
| fractum 6 fuscum 6 | Lyallii |
| fuscum 6 v. splendens 6 | washingtoniensis116 |
| v. Blyttii 6 | Opuntiella |
| Grevillei 6 | californica |
| v. lubricum 6 v. Vahlii 6 | senticulosa107 |
| v. Vahlii 6 latissimum 6 | Ostreobium |
| orbiculatum | Quekettii |
| quaternarium 7 | Reineckei 17 |
| zostericola 7 | Dochwanthran |
| Myelophycus intestinale | Pachyarthron cretaceum |
| f. tenue | Padina |
| Myriogramme | Durvillaei |
| divaricata | caulescens |
| Hollenbergii | mexicana 29 |
| repens105 | tetrastromatica |
| spectabilis105 | Pantoneura |
| Myrionema | Baerii |
| attenuatum 30 | Juergensii105 |

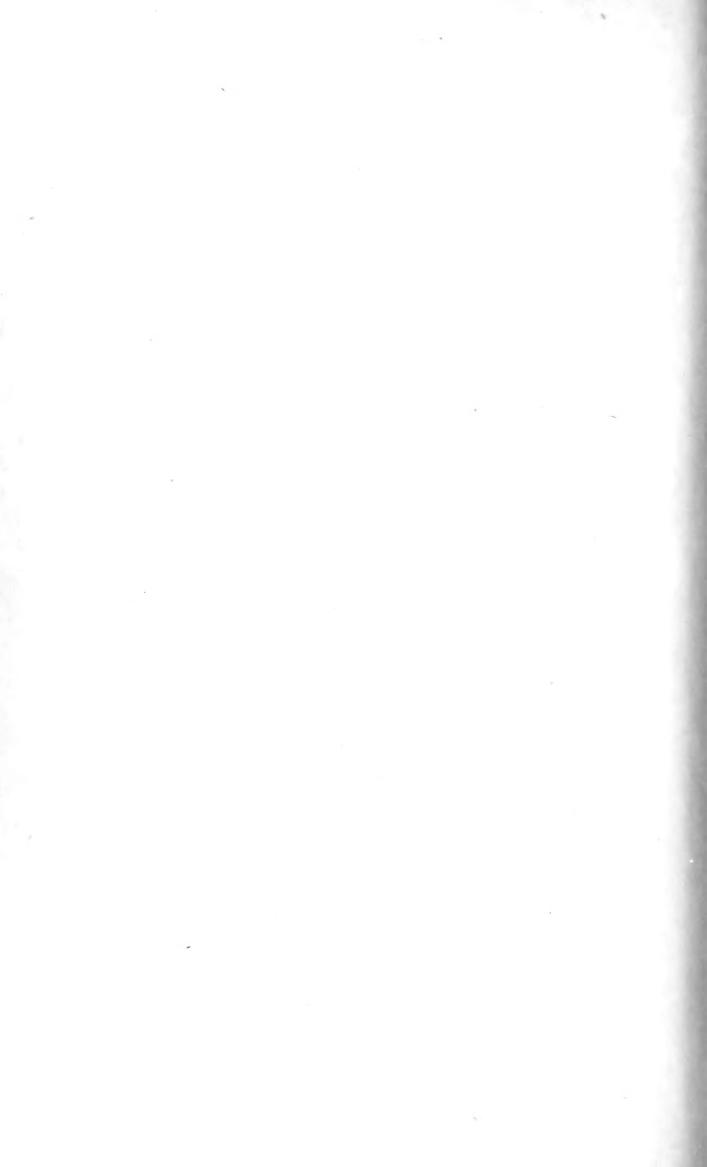
| PAGE | PAGE |
|--------------------------------|------------------------|
| Pelagophycus | Pleurophycus |
| porra 41 Pelvetia | Gardneri 40 |
| fastigiata | Plocamiocolax |
| f. gracilis | pulvinata 81 Plocamium |
| Pelvetiopsis | pacificum |
| arborescens | tenue 81 |
| limitata 47 f. lata 47 | violaceum 81 |
| f. typica 47 | Pocockiella |
| Percursaria | variegata |
| percursa 9 | californica107 |
| Petrocelis franciscana | Polycoryne |
| haematis | Gardneri104 |
| Middendorffii | phycodricola104 |
| Petroglossum | Polyneura latissima104 |
| pacificum 84 | Polyneurella |
| parvum 84 Petrospongium | Hancockii104 |
| rugosum 30 | Polyopes |
| Peyssonnelia | Büshiae 73 |
| calcea | clarionensis |
| clarionensis | Polysiphonia |
| rubra | acuminata107 |
| Phaeophilia | bifurcata107 |
| dendroides 4 | Brodiaei |
| Engleri 4 polymorpha 4 | Collinsii |
| Phaeostrophion | v. compacta108 |
| irregulare 38 | v. deliquescens108 |
| Phycodrys | v. luxurians |
| ambigua | decussata108 |
| Riggii | dichotoma108 |
| Setchellii104 | Eastwoodae |
| Phyllophora | flaccidissima |
| californica | guadalupensis108 |
| Pikea | Hancockii108 |
| californica | Hendryi109 |
| pinnata 61 Pilinia | homoia |
| Lunatiae | inconspicua109 |
| f. simplex 4 | Johnstonii109 |
| maritima | Macounii |
| f. pacifica 4 Platymonas | Marchantae |
| subcordiformis 3 | minutissima109 |
| Platysiphonia | pacifica109 |
| Clevelandii103 | v. delicatula |
| Platythamnion heteromorphum95 | v. determinata |
| heteromorphum 95 pectinatum 95 | v. gracilis110 |
| v. laxum 95 | paniculata110 |
| reversum 95 | pungens110 |
| tepocensis 95 | simplex |
| villosum 95 Pleonosporium | v. heteromorpha110 |
| abysicola 97 | v. intricata110 |
| dasyoides 97 | sonorensis110 |
| polycarpum 97 | Porolithon |
| pygmaeum 98 saccorhiza 98 | cocosicum |
| squarrosum 98 | Porphyra |
| v. obovatum 98 | abyssicola 50 |
| vancouverianum 98 | amplissima 50 |

| PAGE | PAGE |
|--|--|
| Porphyra | dendroidea111 |
| laciniata 51 | gracilis111 |
| f. $umbilicalis$ 51 | pennata111 |
| lanceolate | robusta111 |
| miniata f. cuneiformis 51 | v. divaricata |
| naiadum | Pterygophora |
| Nereocystis | californica |
| occidentalis 51 | Ptilota |
| perforata 51 | asplenioides101 |
| f. segregata | californica101 |
| pulchra | densa101 |
| Thuretii | filicina102 |
| tenuissima | hypnoides |
| umbilicalis 51 | tenuis |
| _ variegata 52 | Pugetia |
| Porphyrella | firma 76 |
| californica 52 Gardneri 52 | fragilissima |
| Porphyropsis | Punctaria |
| coccinea | chartacea |
| Postelsia | expansa |
| palmaeformis 41 | latifolia |
| Prasinocladus | lobata |
| lubricus 3 Prasiola | occidentalis 35 |
| borealis | orbiculata 35 |
| calophylla | plantaginea 35 |
| Predaea | Pylaiella Gardneri |
| Masonii 78 | Gardneri |
| Pringsheimia | tenella |
| Marchantae 5 | unilateralis |
| Pringsheimiella Marchantae 5 | washingtonensis 20 |
| Prionitis | |
| abbreviata | Ralfsia |
| Andersoniana | californica |
| australis | clavata |
| filiformis | Hancockii |
| guaymasensis | hesperia 25 |
| kinoensis | occidentalis |
| lanceolata | pacifica |
| linearis | Rhizoclonium |
| Lyallii | implexum |
| mexicana 75 Sternbergii 75 | lubricum |
| Pseudodictyon | riparium 10 |
| geniculatum 5 | tortuosum 10 |
| Pseudopringsheimia | Rhodochorton |
| apiculata 5 | Amphiroae 52 arcuatum 54 |
| Pseudoscinala Snyderae 56 | arcuatum 54 concrescens 55 |
| Pseudoulvella | microscopicum |
| prostrata 5 | penicilliforme |
| Pteridium | purpureum 55 |
| spinulosum102 | tenue 55 |
| Pterochondria | Rhododermis elegans 63 |
| pygmaea | elegans 63 Rhodoglossum |
| Pterocladia | affine |
| mexicana 59 | americanum 87 |
| Pterosiphonia | coriaceum 87 |
| arctica111 | Hancockii 87 |
| Baileyi111 | latissimum 88 |
| bipinnata111 californica111 | parvum |
| camformea | roseum co |

| P | AGE | PA | GE |
|-------------------------|---|---------------------------------|-----------------|
| Rhodomela | | Scinaia | |
| larix | 116 | articulata | 56 |
| lycopodioides | 116 | complanata | 56 |
| dichotoma | | Johnstoniae | 56 |
| f. setacea | 81 | | 56 56 |
| Rhodosiphonia | | Scytosiphon | 00 |
| californica | 110 | | 37 |
| Rhodymenia | | lomentaria | 36 |
| arborescens | | | 36 |
| attenuatacalifornica | $\frac{91}{91}$ | | 36 |
| Dawsonii | 91 | v. complanatus Siphonocladus | 36 |
| divaricata | 91 | | 15 |
| Hancockii | 91 | Soranthera | |
| lobata | 91 | | 35 |
| lobuliferapacifica | 91 | | 36 |
| palmata | $\begin{array}{c} 91 \\ 91 \end{array}$ | Sorella delicatula1 | ۸٥ |
| f. mollis | 91 | v. californica1 | 03 03 |
| f. sarniensis | $9\overline{2}$ | divaricata1 | |
| palmettiformis | 92 | pinnata1 | |
| pertusa | 92 | Spermothamnion | |
| rhizoidesrosea | 92 | | 98 |
| stipitata | $\frac{92}{92}$ | Snyderae | 98 |
| tepocensis | 92 | 7_ | 26 |
| Rhodymeniocolax | | | $\frac{26}{26}$ |
| botryoidea | 92 | 7. 7. 7 | 26 |
| Ricardia | | furcigera | 27 |
| saccata | 115 | | 27 |
| intricata | 27 | | 27 |
| | 01 | | $\frac{27}{27}$ |
| Sarcodiotheca | | | $\frac{27}{27}$ |
| cuneata | 79 | subfusca | $\overline{27}$ |
| dichotoma | 79 | Spongomorpha | |
| ecuadoreanaelongata | 79 70 | | 14 |
| furcata | 79 79 | | 14 14 |
| linearis | 80 | | 14 14 |
| meridionalis | 80 | | 14 |
| Sarcophyllis | | saxatilis | 14 |
| arctica | 61 | v. Chamissonis | 14 |
| Sargassum acinacifolium | 47 | spinescens | 14 |
| Agardhianum | 47 47 | Sporochnus pedunculatus 3 |)) |
| asymmetricum | 48 | Spyridia | 00 |
| Brandegeei | 48 | filamentosa 9 | 97 |
| Camouii | 48 | Stenogramme | |
| herporhizum | 48 | californica 8 | |
| | 48 48 | interrupta 8 | 35 |
| Johnstonii | 48 | Stephanoptera gracilis | 0 |
| f. gracile | 48 | Stictyosiphon | o |
| lapazeanum | 48 | tortilis 3 | 38 |
| | 48 | Streblonema | |
| | 48 | aecidioides | |
| | 48 48 | f. pacificum | |
| Saundersella | 40 | anomalum 2 codicola 2 | |
| simplex | 33 | corymbiferum 2 | 24 |
| Schizymenia | | Desmarestiae | 24 |
| | 78 | evagatum 2 | 24 |
| | 78 | investiens 2 | |
| * | 78 | irregulare 2 | 24 |
| Sciadophycus stellatus | 90 | Johnstonae 2 | 1.1 |
| archards | <i>3</i> U | minutissium 2 | : 1 |

| PA | GE | PA | |
|---|--|---------------------------------|--------------------------------------|
| Streblonema myrionematoides pacificum penetrale Porphyrae rugosum scabiosum transfixum vorax Stromatocarpus Gardneri Syringoderma | 24 25 25 25 25 25 25 25 25 25 | pentitivity | 9 9 9 9 9 9 5 5 |
| abyssicola Taonia Lennebackerae | | pachynema | 15 15 |
| Taenioma perpusillum1 | | Vaucheria litoria Veleroa | |
| Thalassiophyllum clathrus Thuretellopsis | | subulata1 | 11 |
| Peggiana | | Weeksia Fryeana Howellii | 61 62 |
| intricata | 93 6 | reticulata | 62 |
| v. umbrina | 6 | Whidbeyella cartilaginea | |
| Mertensiana Tylotus | | Wurdemannia miniata | 60 |
| Cunninghamii | გა 3 | Zanardinula abbreviata | 74 |
| flacca | 3 4 4 4 | Andersoniana | 74 74 74 74 74 75 |
| Ulva angusta californica dactylifera expansa | 8 8 9 | linearis | 75 75 75 75 75 |
| fenestrata Lactuca | 9 9 9 | Zonaria Farlowii variegata | 29 29 |







| | | | | | *11 | |
|---|--|---|-----|---|-----|--|
| | | | | | | |
| | | | | | | |
| | | | | | • | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | - 1 | | | |
| | | | | | | |
| - | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | • | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | * | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | , | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| • | | |
|---|---|--|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | • | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | • | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | ٠ | |
| | | |

